

TIPS & TRICKS

FOR EVERY TYPE OF ANIMATOR

BY: ANIMATION MENTOR
STUDENTS, ALUMNI, AND MENTORS

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WHAT TYPE OF ANIMATOR SHOULD I BE?



BY: ERIK MORGANSEN
INDUSTRIAL LIGHT & MAGIC
ANIMATOR
MENTOR



Erik Morgansen is a mentor and Industrial Light & Magic animator who has worked on films like ***Ant-Man***, ***Jurassic World***, ***Avatar***, and more!

This webinar was so inspiring that we decided to catch up with him right after for some additional questions we thought would be applicable to all students and aspiring animators out there, no matter what part of the animation journey you're at. You'll soon find that in whichever track you decide to pursue, anything is possible in the world of animation!

So, without further ado, read on and become inspired.

ANIMATION MENTOR: What kind of work do you need when submitting your demo reel to the various types of studios?

ERIK: With all of these, the answer is similar in the sense that you want to customize your real at least for the studio, and at best for the specific project that you'd be staffed on (sometimes it's not possible to know this, but if you can, find out!). In other words, if you were applying to DreamWorks for a sequel to ***How to Train Your Dragon***, you'd want to include some creature animation on your reel that shows you can do weight/physics/and character performances. You'd also want to show some human-

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type acting and action performances.

What if you don't have any of those specific things to show? You can begin to get a little creative with your reel submission. Maybe you've got some bird animations that show you can do flight patterns or wing cycles? Maybe you've got some very cartoony pantomime stuff with a very stylized human character?

At some point you'll need to consider what is your most relevant work and what is your best work. Ideally you will show the work that you consider to be your best. If you have a shot that specifically applies to a show that you want to get staffed-on, and you think it's not the best representation of your skills, you may need to make a judgement call about including it.

As for the specific types of studios you may be applying to, here are some thoughts:

GAMES:

For in-game animation, cycles are definitely good. Again you want to consider the type of game, is it ***Halo*** or ***Mario Bros***? If it's a realistic looking game, having realistic human characters doing naturalistic human action is going to be most helpful to show. For a cartoon style game, obviously more stylized squash-and-stretch motion is best.

If you are doing cinematics, same concept applies, you just may want to show less cycles and more complete shots with multiple characters, action, and acting.

ANIMATION STUDIO:

For feature animation work, showing that you can do acting performances will likely be the most helpful. These films are all about telling stories. Characters emoting in both subtle and broad ways (both comedic and dramatic) are typically what make up the majority of the footage of these films. There's always a ton of other stuff (fights, chases, slapstick or pantomime), but these movies always are centered around moving a narrative forward by characters saying and doing things, so I'd focus there first.

Another thought to consider is that 'family' movies are often times being produced at these types of studios. It's best to leave crude jokes and profanity out of your reel when submitting here. I've seen this really work against people in the past.

VFX STUDIO:

Realistic looking motion with a lot of detail is the key here. You do have a bit of range as well (depending on the type of film you are applying to work on). You may be working specifically

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on aerial or space battles with flying vehicles, horses crossing a deep river, digital-doubles running from explosions, or robots fighting. In each case you'll want to show very realistic weight and physics and have some 'dirt' (or realistic/organic looking detail).

BOUTIQUE STUDIO:

This is a place where you can thrive more as a generalist, sometimes even between disciples. You are also likely to work on different styles of animation as well. You should be able to get away with showing a more varied reel here (a mix of stylized and more realistic work). You may even benefit from showing rigging, modeling, simulation, and texturing and lighting skills.

Again, as with all of these types of studios, you'll want to find out specifically the type of project or role they are hiring for and design your reel around that as much as you possibly can.

ANIMATION MENTOR: You had suggested to try every type of animation and find what type of animator you could be. How should one get started? (ex. Short film, taking courses, tutorials, etc.)

ERIK: Yes! Those are all good suggestions. Getting mentorship of some kind is really important as well (either in this program or by some other means). A big part of what you are doing when you develop your skills as an animator is developing your 'eye', or your critical sensibility surrounding your effectiveness in expressing yourself through this medium. Jeez, did I just type that? In any case, I think you know what I mean. When you look at a shot in progress, can you see the problem areas with timing and spacing? Are there places where you can see that the attitude can be stronger or that you need more texture or energy?

You can get a huge jump on this by watching other really experienced animators critique your work. I remember the first time a really accomplished anim supervisor with a 2d background stepped through one of my shots and drew-over my work on 1's, I was completely floored. At that point, I had no idea that people scrutinized their work to that level of detail. It completely changed the way that I've approached my work ever since. I've had countless other experiences like that in my career as I've learned this craft from other people. I really doubt that I could have ever arrived at any of these lessons if I'd simply looked at books, or online tutorials, or studied other people's work.

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ANIMATION MENTOR: You highlighted that mentorship is crucial in really grasping and understanding the art of animation – what kind of mentor are you and what is your teaching philosophy?

ERIK: My main approach to mentoring is to try to give students a clear picture of what it's like to work in this industry. This is what I feel like I didn't have access to when I was first learning how to animate, and what proved to be most valuable when I did finally begin working with people who had a lot of experience.

I make a point of always relating the assignments to the kinds of expectations you'll face when you are working professionally. When I do critiques, I look at the work from this perspective as well. Directors have specific things that they expect from us as storytellers, so I steer students in a direction that would best demonstrate these. Animation supervisors have specific things they want to see in our work (weight, timing, etc), but they also have specific expectations about how we work. Do we show our blocking early? Do we include all of our ideas in the rough passes? Do we ask the right kinds of questions? Show up to dailies on time? Get our shots in on time, or let production know ahead of time if there's going to be a delay?

There aren't necessarily any right or wrong answers when it comes to doing the assignments in AM, but there are ways that are going to fulfill the requirements of being a professional animator better than others. I'm either trying to steer students in that direction, or making it clear that they have a choice, but one way will make for a better presentation when they are looking for a job.

Beyond that, unless a student is really stuck and asking for a lot of help with their story, I'm really hands-off. I want students to feel like they own their shots, and I'm just here for guidance. People do better work in that kind of scenario. The best directors and animation supervisors that I've worked with all do this.

ANIMATION MENTOR: In your opinion, what are the most common mistakes that students consistently do? What is your advice on how to counteract them?

ERIK: From a technical standpoint, students are usually struggling with getting enough variation in the timing of the various parts of the body. It's

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common to see the hip and chest and arms all moving as one unit for at least part of a shot. I often see action that either starts or stops without enough anticipation or follow-through. Parts of the body sticking in space for many frames is really common too.
To solve this, It's helpful to think about the hierarchy of the muscle systems in the body. Big muscles more slower than small ones. Eyes and eyelids have tiny muscles that move really fast. The muscles around the hip are much bigger, move more slowly, take longer to get going and to stop moving. You just need to make a decision about what will be driving your action and then plan ahead so that it feels like the whole body is involved, and each part is moving at it's own speed. It may sound like I'm oversimplifying it, but that's really the key.

The proportion of energy is important as well. If an action is broad and violent, it will need a bigger anticipation than one that is contained and casual. Again, sounds simple but you can really boil it down to these couple of things and mechanically your motion will look good.

From a storytelling standpoint, getting the eye-direction working seems to be the biggest one. It's one of the clearest things that gives the audience information about what your character's intention is. I find that I'm usually giving students notes on eye-direction up to the end of the assignment.

For this it's really important to know your character and understand the situation that they are in. You need to approach this part of your work the same way that an actor would and really get in the skin of your character. Know what they want and how they relate to the people or environment around them. Know why they are doing or saying something. Know the point of the shot. This is really a specific case-by-case problem.

ANIMATION MENTOR: What is the most gratifying aspect of being a mentor? Do you learn from the students?

ERIK: Yes, I absolutely learn from students and from the process of being a Mentor.

The previous question about common mistakes is a good example. I've found that it's much easier for me to anticipate the kinds of mistakes I'll make in my own shots after watching students struggle with them a thousand times. It's also really easy for me to fix them after giving similar direction to students so many times.

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Mentoring has made it much easier to communicate my ideas as an animator (and really in all other aspects of my life to a certain degree as well). It's kind of incredible, I don't really get stressed about giving presentations to groups of people now. I used to really struggle with that, but it really is another thing that you can practice and become more skilled at. That's been a nice surprise.

It's also a really satisfying and kind of a thrilling feeling to look at a students work and know that I can really help people to improve a lot just by making a few changes. It's exciting for me because I can see how close people are to getting a good result, even when they aren't able to see it yet. It feels like it wasn't that long ago that I was learning the same things.

Most of all, mentoring really keeps me excited and interested in doing animation. Seeing people at the beginning of their careers, and seeing the kinds of potential they have, makes me feel really fortunate to be able to help them continue on their path. That really helps keep me energized in doing my own work.

ANIMATION MENTOR: We hear that humility is a great trait to have as an animator, can you tell us why?

ERIK: Yes, humility is an important aspect. There are a few points to this. Learning to do animation can be brutal in a lot of ways. It's extremely time consuming, it requires many different kinds of thinking (sometimes almost simultaneously), and it requires a massive amount of knowledge about a lot of different disciplines. At the same time, the results are always right in front of you on the screen, and you are constantly being critiqued. That's a lot of pressure. Having a healthy relationship with your pride, and being honest with yourself about your abilities is the best way to survive and ultimately thrive in this situation.

This is a collaborative craft. It's really necessary to be about communication and work as a member of a team to be effective as an animator. You need to be able to step back and be as critical about your work and your abilities as the rest of the people on your team. You also need to understand that everybody is at a different place in their career as an animator. It's okay to not know all the answers. Don't be too proud and scared to ask questions. It's the best way to improve.

One last thought, it really is important to balance humility with a certain amount of confidence. Show up to dailies with something that you feel is

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strong, and then don't be afraid to tear it to pieces. You do want people to have faith in your ability to follow-through, be resilient, and ultimately turn in some really cool looking work.

You can be fearless and humble at the same time.

ANIMATION MENTOR: Any closing thoughts?

ERIK: The main take-away from all this is to be an animator first. Get as strong base with all the fundamentals. The same ones really to apply to all types of animation.

Your career path really is your own. It's up to you to decide what makes you most excited about doing this kind of work. Animation demands so much of your time and energy, and you do need to find a sense of meaning in this work if you want to do it long-term. It's also important to remember that doing a specific kind of animation may seem interesting or rewarding now, but may not feel that way in a few years.

Remember to be yourself and have fun as well. If you are enjoying your work, the audience is bound to enjoy it too. ❖

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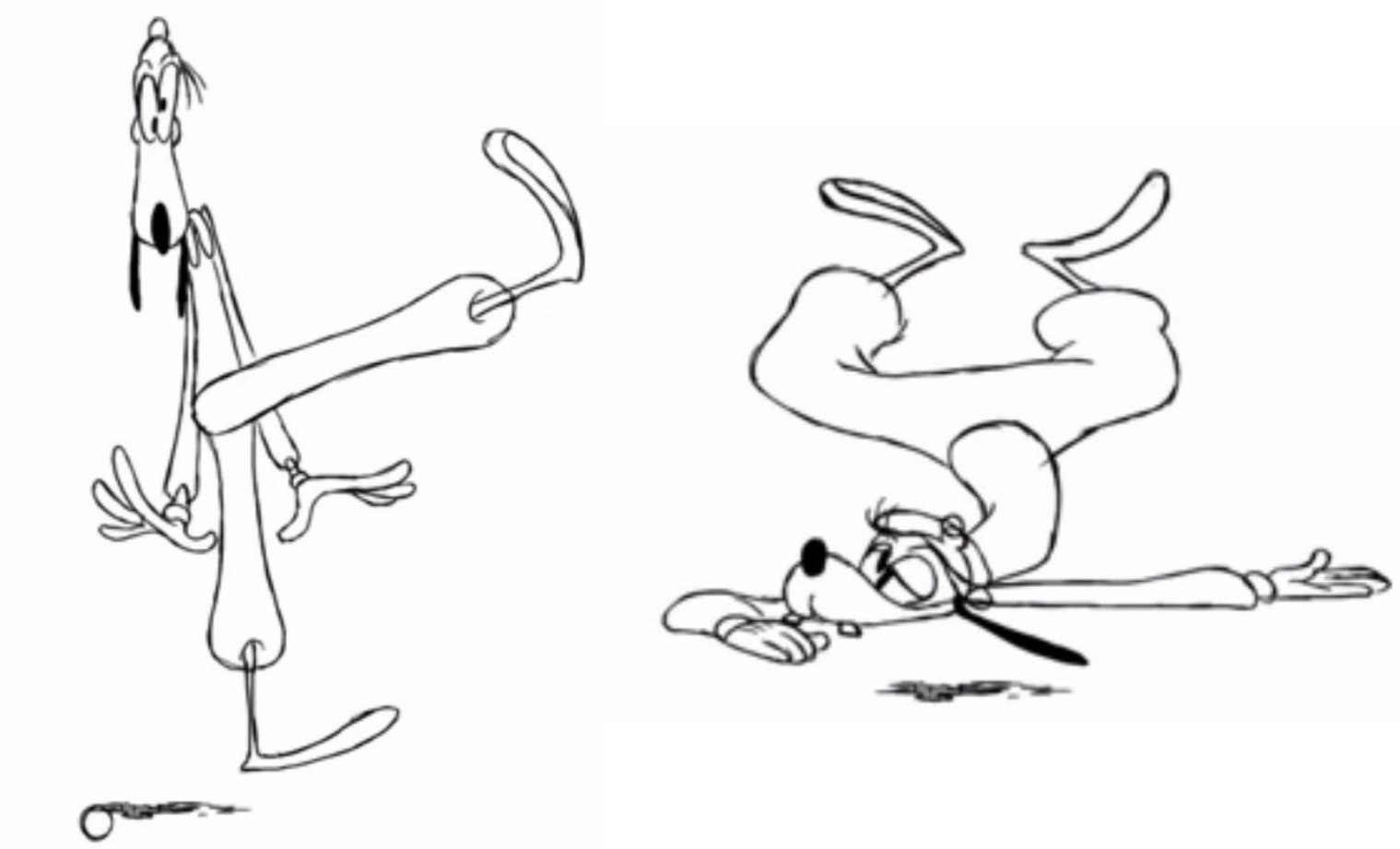
WHY I LEARNED CARTOONY ANIMATION



Q&A WITH
FELIPE ALMEIDA
COMBO ESTUDIO
ANIMATOR
STORYBOARDING STUDENT



2D Goofy Master Study done by Felipe

Felipe shares with us his experience and key takeaway moments during his time in the Cartoony Animation Workshop with former Pixar Animator Mark Oftedal. It's no secret that when you're in the cartoony animation mindset, the phrase "you can't do that" goes right out the door. See how Felipe was adopted the cartoony mindset into his work as a 3D animator. Read along, check out the cool shots he walked away with and be inspired to embark on this journey!

ANIMATION MENTOR: Where are you from and how long have you been animating?

FELIPE: I'm from Rio de Janerio, Brazil and I've been working in animation for 4 years.

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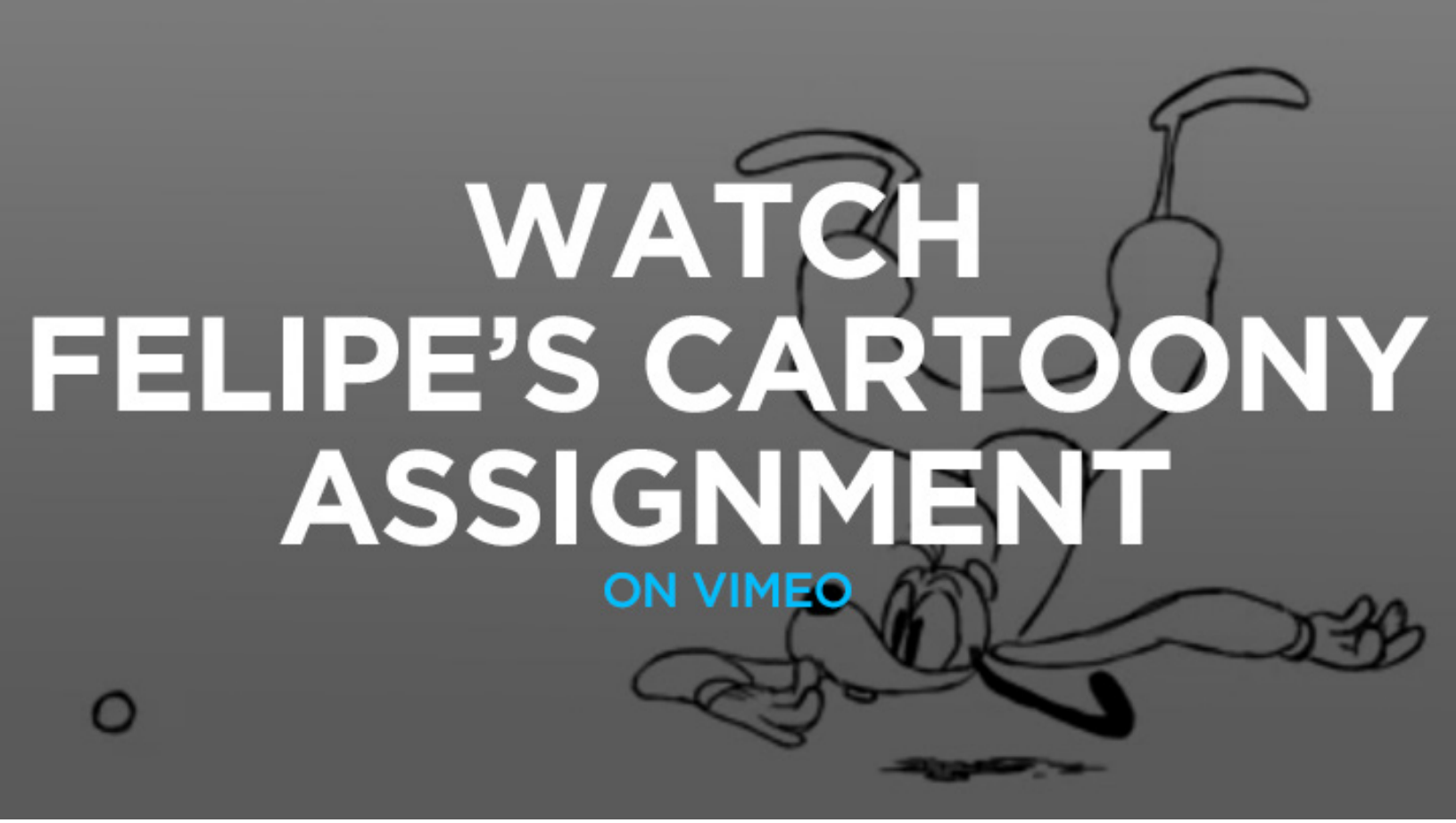

ANIMATION MENTOR: Where do you currently work and what are some projects you're currently working on?

FELIPE: I`m currently working in the Combo Estudio. I'm part of a super cool project for YouTube called ***Any Malu***, who is the first animated YouTuber in the world!

ANIMATION MENTOR: Why did you decide to take the Cartoony Workshop?

FELIPE: I decided to take Cartoony because I'm always trying to improve my animation and learn something different. And also, I always had the dream to become a Disney animator someday, and I thought that the Cartoony Workshop could help me gain a strong base to build my cartoony workflow and in hopes of elevating my skills as an animator. Additionally, my girlfriend who is currently in Advanced Acting (class 5) at Animation Mentor, had recommended Animation Mentor to me.

ANIMATION MENTOR: What did you learn from the workshop?

FELIPE: The most amazing thing about the workshop was learning how to analyze classics like Donald Duck or Ichabod Crane, for example. Then from

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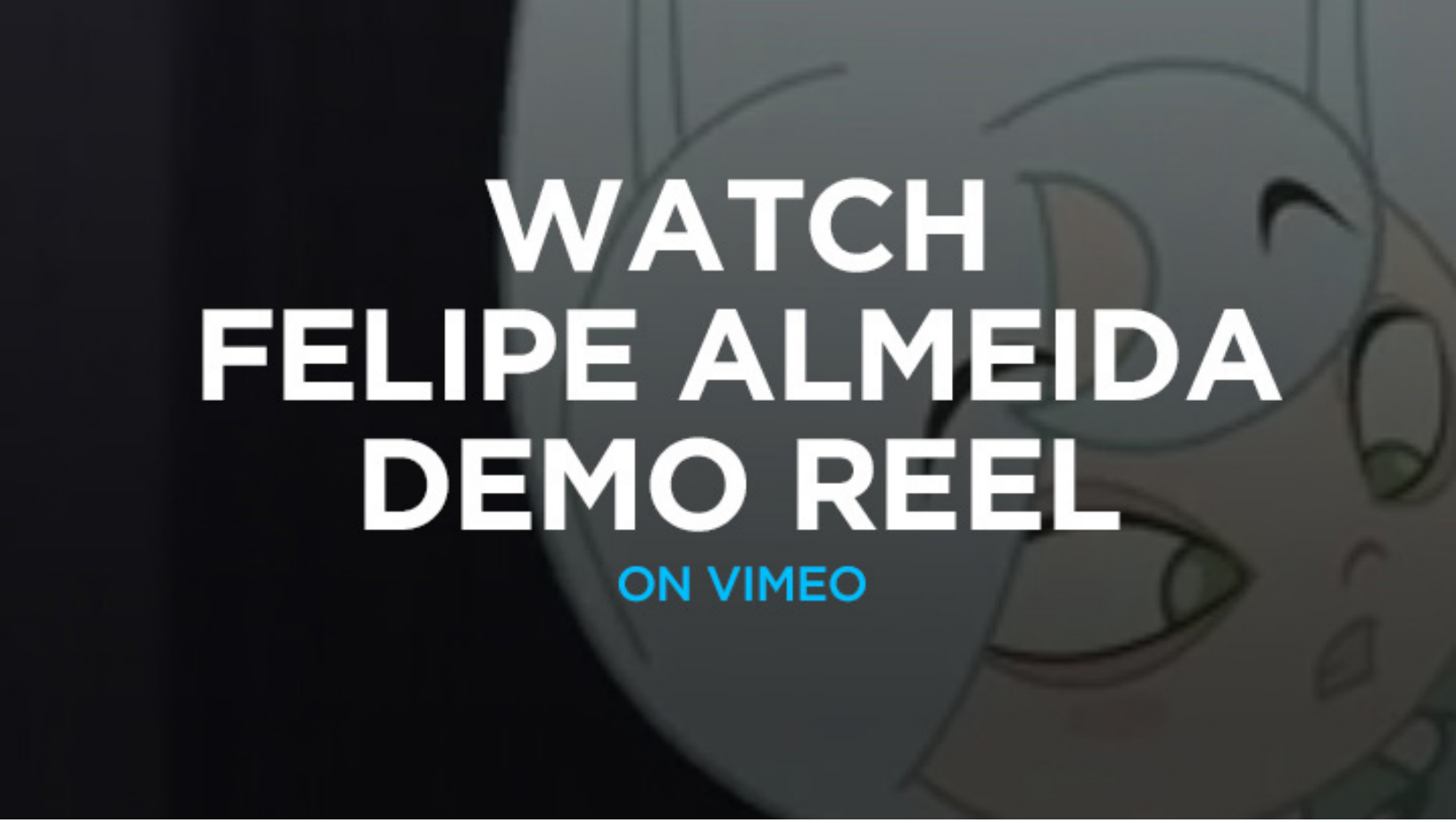

there, I would recreate that animation and workflow on a 3D character. Above all, getting the opportunity to study with Mark was other amazing experience. He is such a wonderful person and an AMAZINGLY talented teacher. Having the privilege to be one of his students along with the time I spent in his class and all that I learned will be part of my workflow forever.

ANIMATION MENTOR: Finally, what advice would you give to students after taking this workshop?

FELIPE: STUDY STUDY STUDY!! I can't emphasize how important this is. Always try your best and put your best foot forward. All in all, the **Cartoony Workshop** was amazing, Mark was amazing and Animation Mentor is amazing. To anyone on the fence, don't miss out on the chance to learn many things about animation, make friends and have a great experience! ❖

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ARE YOU MEANT TO BE A GAME ANIMATOR?



BY: JUSTIN OWENS
CURRICULUM DIRECTOR
ANIMATION MENTOR

There are so many different types of games out there today across a wide range of delivery platforms and styles. From exploration and adventure games like ***Uncharted*** *or* ***Tomb Raider****, to action and first person games such as* ***Call of Duty*** *or* ***The Division****, to mobile titles like* ***Clash of Clan*** *or* ***Angry Birds****, they all have something in common: animation. Animators work to help bring these games to life with their passion and artistry. Justin Owens, Animation Mentor's Curriculum Director, talks us through the differences – awesome!*

Who knows, game animation may be right for you.

How Game Animation Differs from Feature and VFX Animation

The basic fundamentals and underlying principles used by animators in games, feature animation, or vfx work is really the same. Timing, spacing, arcs, and weight are all crucial to any form of animation.

Differences in Exaggeration

One of the areas that differs are how those basic animation principles are exaggerated and/or toned down. One example of that is a game character may anticipate down before a jump, but that anticipation will be so much subtler than what you might expect to see in feature animation. The player expects a certain level of responsiveness when they press a button. Too much exaggeration in that instance would make it feel like the character wasn't reacting to the player's input.

Stylistically game animation also tends to exaggerate physicality and body mechanics. Feature animation pushes the exaggeration into a more stylistic and cartoony arena, while the exaggeration found in VFX work is much more subtle and realistic.

Exaggeration of style and the animation principles are present in each, but how they are used changes and gives each their own unique feel.

Differences in Audience Reaction

One of the other big differences between game animation or feature animation and VFX is how the audience, or player, interacts with the final result. In both feature animation and VFX the audience passively watches the final result (film). The animators try and elicit an emotional response from the audience, but there isn't any direct interaction

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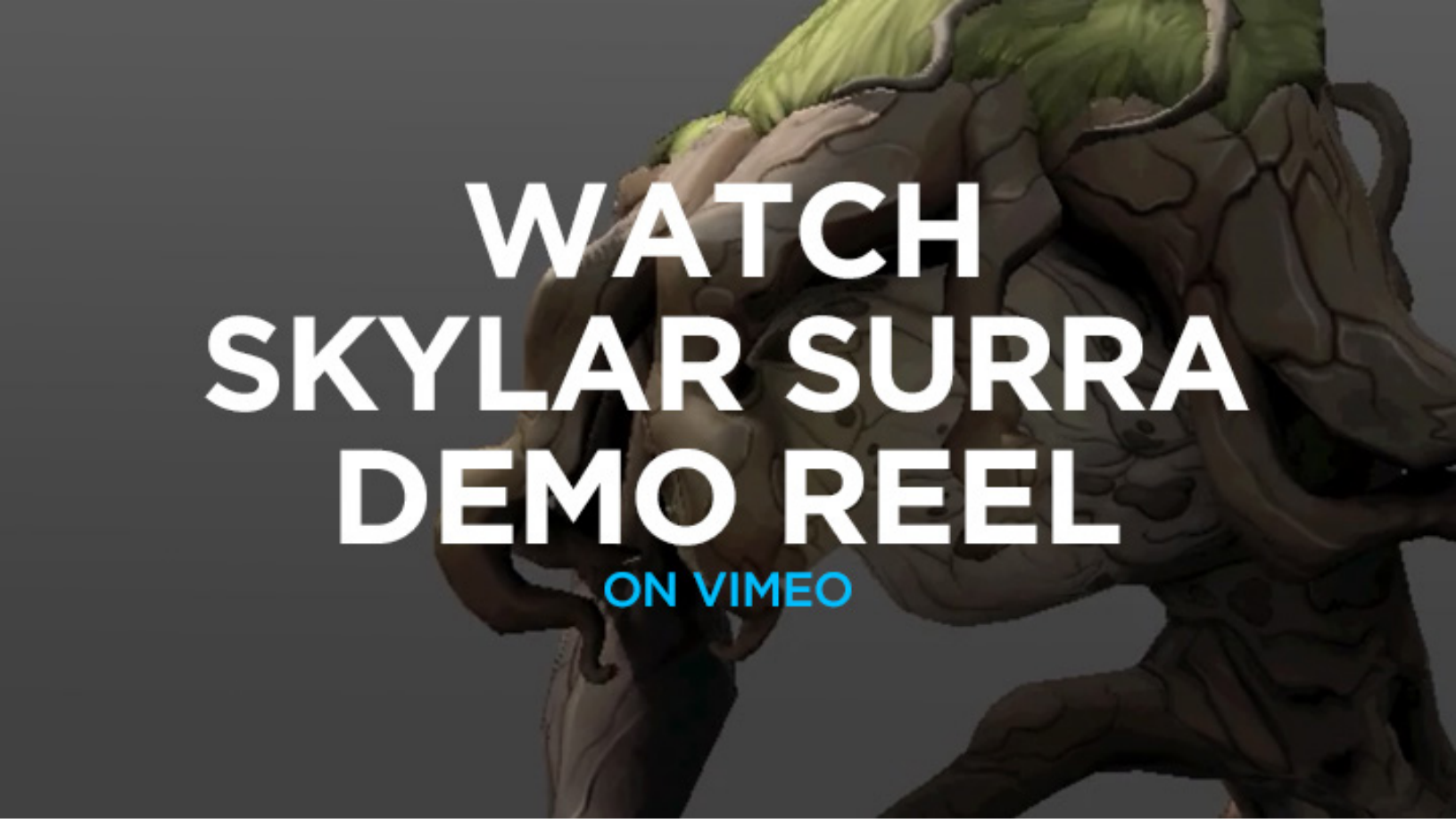

Riot Games Animator Skylar Surra's demo reel. A nice example of game animation cycles

or participation from the audience. Animators are also provided with a camera for their shots and they make sure their poses and emotional beats read from that viewpoint. That means at times they can "cheat" a pose so that it looks good from that main camera, but could feel off balance if viewed from another angle.



An example of VFX animation – ILM motion test for Jurassic World

That's not something that can be done in games. Instead game animators have to constantly make sure their animation reads from all angles, as both the player character and camera can be freely moved about. It's also a given that the player will be directly controlling the character and interacting with the environment. This is where animators become an integral part of the

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A nice example from Zootopia pushing the exaggeration

game design team to help shape those interactions. By animating from every angle game animators become adept at making the characters feel completely integrated within the environment. It's a rewarding feeling when you can see your animation in game and the characters feel like a living breathing part of that world.

Differences in Influence

One of the most exciting differences is the impact and influence the game animator has on the final result. Within feature and vfx animation, an animator is heavily directed and looks for smaller moments where they can add their personal flair. In comparison the games animator can have much more impact on a character, typically following that character through production and greatly influencing the behaviors, quirks, and overall personality.

The Game Engine and Animation Workflow

Animation is still done within a 3D package such as Autodesk's Maya, and is then exported and brought into a game engine such as Unity or Unreal Engine 4. Rather than animating a full shot as you would on a feature, animators create a whole series of animation cycles that

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are then pieced together in the game engine.

It's not uncommon for an animator to be assigned to a specific character, and then to follow that character through the entirety of game production. In that way the games animator can have more influence on the final look and feel for a character, than they might in features or VFX. It's a collaborative effort between the animators, game designers, concept artists, and more, when bringing these characters to life within a game.

The Industry Need and Benefits of Being a Game Animator

The games industry needs talented animators that are ready to bring their voice and passion to the table. Explore this style of animation and increase your skills while also broadening your job opportunities.

Be part of the collaborative process that is found game animation, and help bring your ideas to life. There's nothing more satisfying than helping to create something bigger than yourself and seeing where your contributions helped improve the end result. We invite you to try it yourself and check out our Game Animation Fundamentals workshop.

There are a couple reasons you should consider giving games animation a try. For one, it's important when learning animation that you explore all styles and career paths available to you. This will help you to have a well rounded skill set, but will also allow you to find where your passion within animation lies. We've heard from mentors and alumni alike who have stumbled into games animation and found it to be an incredibly fulfilling career path.

There's something very satisfying when you can take your animation from within Maya and then interact with it in a game. Seeing how your animation choices directly influence the look and feel of the character is really inspiring. It also allows for quick iteration as you can see your animation from a new and fresh perspective. We invite you to try it yourself and check out our **Game Animation Fundamentals workshop**.

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WHY I LEARNED GAME ANIMATION (AND WHAT YOU CAN EXPECT)



BY: BEN BOYLE
ANIMATION MENTOR STUDENT



I love watching feature films, but there's something about interactive media that draws me in deeper. So, when Animation Mentor offered the Game Animation Fundamentals Workshop, I knew that was the next step for me! Then the Game Animation Combat Attacks Workshop came out so I took that too! Here's an insider's view on these workshops and what to expect.

I started studying at Animation Mentor to fulfill an old dream of mine — I started studying 2D animation in college in 1994 but switched to study multimedia and became a web developer. No regrets there, but as soon as I saw I could learn animation online with mentors from top studios, I was sold!

Having Matt Garward as a mentor in Body Mechanics just made me want to know more about it, and when Animation Mentor offered the Game Animation Fundamentals Workshop, I knew that was the next step for me! Then the Game Animation Combat Attacks Workshop came out so I took that too!

> Getting to test my animations out with a controller was amazing, I had so much fun running around jumping and punching stuff

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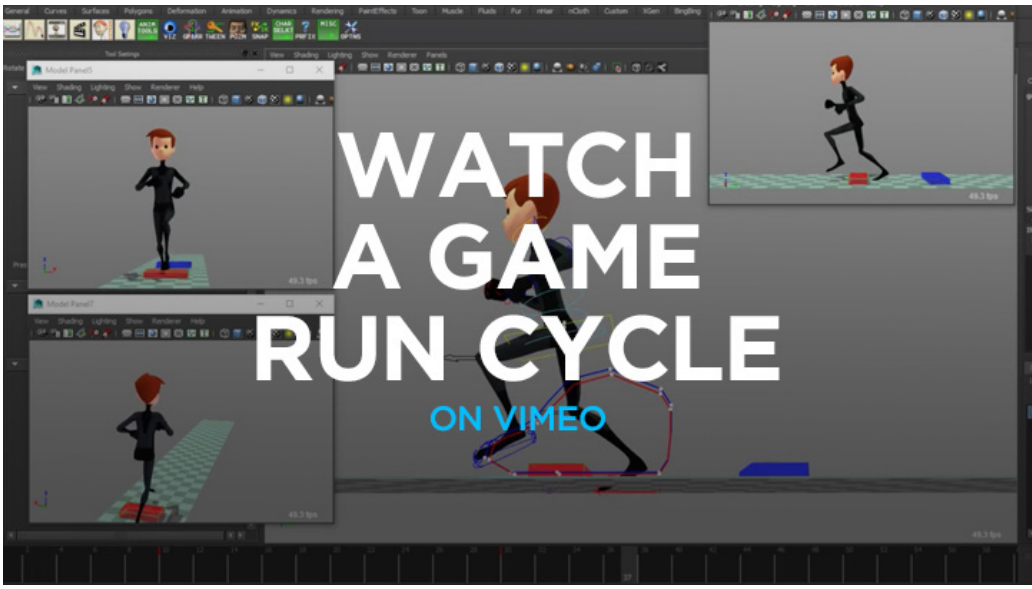
What to Expect in a Game Animation Workshop

Shahbaaz Shah was my mentor in both workshops and great with feedback and explaining how a games engine assembles all the animation assets to bring a character to life and the different clips an animator would create to bring a character to life. You get a decent bite at that in the workshops, but there's evidently a lot more depth to it in many games!

Workshops are six weeks and you submit work for the first five weeks. It's not a lot of time so you need to jump right in! One thing I really loved about the assignments was the animation was based on short clips and cycles — idle, running, jumping, and combat moves. It felt a lot easier to manage than some of the longer acting/action shots, and it really helped me focus and find more time for polish.



In other classes I often lost time on staging and tracking characters moving through space. When animating a character in a game, the game tracks where they are in 3D space and plays the right cycles. When animating, you can focus on making a really awesome jump and not worry about where they go and land. It's kind of like the COG is done for you—not exactly though. Then all the fun detail that makes it interesting to watch (and play!), that's what you animate!

Exporting clips from Maya and importing them into Unreal was neat. Getting to test my animations out

> I highly recommend the games workshops. They're a great opportunity to practice body mechanics and really focus on communicating clearly with every short clip.

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Ben Boyle as the Animation Mentor Stewart Rig!

with a controller was amazing, I had so much fun running around jumping and punching stuff

What I Learned

The format is very similar to other AM classes—new lectures each week (including some technical add-ons that explain more about how game engines work), a weekly Q&A, and assignments with critiques.

Shahbaaz had lots of great feedback on my body mechanics and good info on how game animation works. I'd love to get deeper into using breakers to add more variety to cycles and configuring a state machine myself.

Yeah, it was kinda geek heaven for me with animation, interaction, user-interface, and programming mixed in there. The workshops focus on animation, of course, but I couldn't help poking around in Unreal.

I definitely have a much better understanding of game animation workflow now. I know how to work on small clips, take them back and forth between Maya and Unreal. It was really interesting learning how the game engine blends animation together. Like if you are making your character move forward but not at top speed, should they walk or run?

You can create a walk cycle and a run cycle and the game engine will create a half-walk/half-run by blending the two together. It's pretty cool! Of course, a half-walk/half-run should probably look more like a jog and it isn't really

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a blend of walking and running. So you can also create a jog cycle and put that in there, then configure the game engine to blend between walk-jog and jog-run. It's fantastic for learning more about body mechanics.

Connecting With Your Audience

As an animator… well everyone gushes about animation in feature films—and, I know, it is awesome. Sometimes I think game animation flies under the radar. But think about it… if you're playing a game for hours and hours, you are going to get really familiar with the character's run/walk/climb/fall animations. Everything needs to read clear and super-fast so the player can react and make decisions and enjoy the game—if you tell Link to roll sideways to dodge an arrow, that rolling animation gives you the



Working hard.

feedback to know that it's working.

If it looks cool and powerful, then the player will feel cool and powerful. It's potentially a lot more intimate. If you're sneaking around and an enemy reacts, you're aware of that from the body language. That's animation that someone had to create. It all works

> If you're interested in any form of interaction with the audience then this is a great introduction to the workflow — how to build pieces of animation, how a game engine blends them together.

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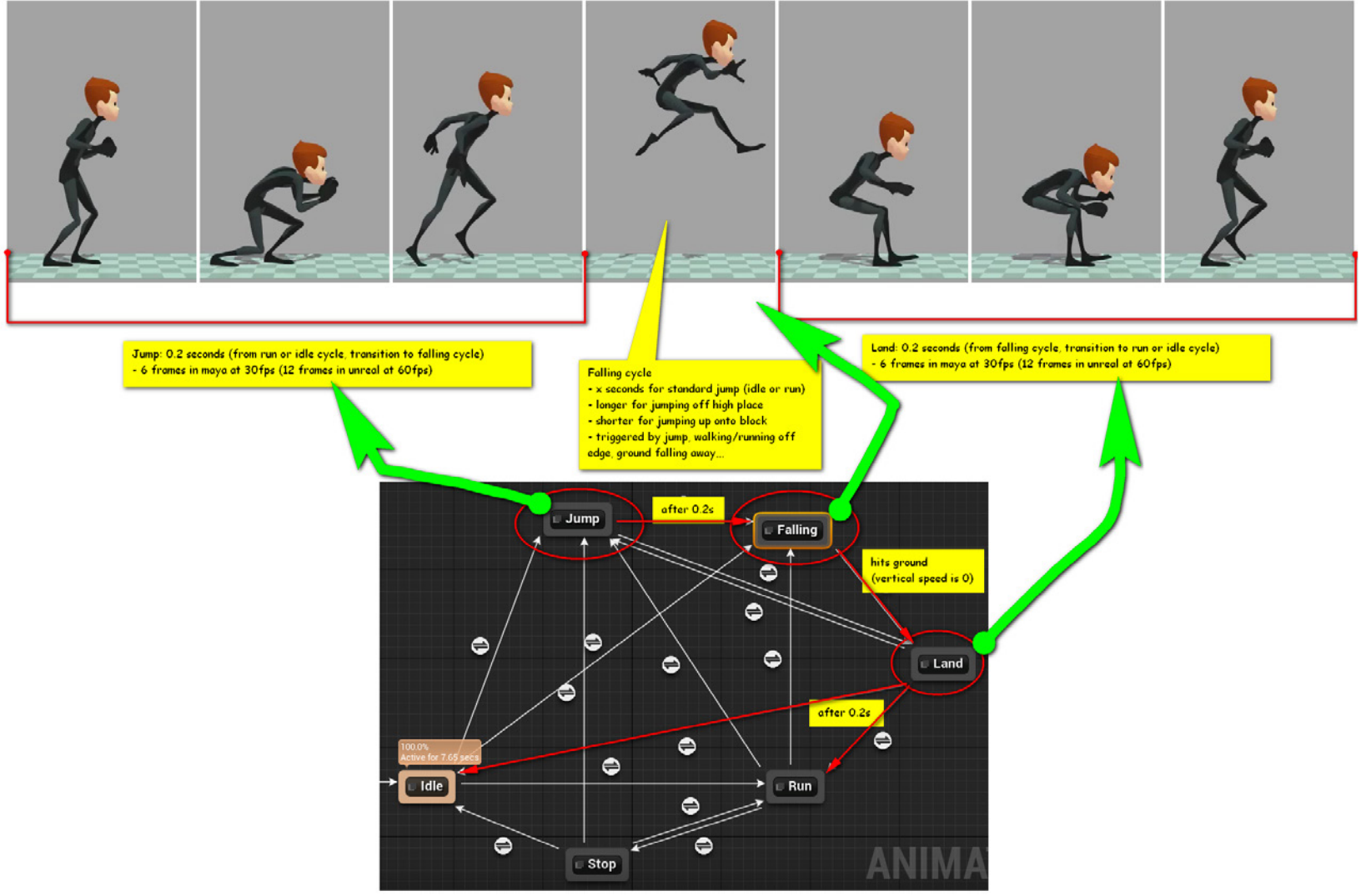

Jumping, Falling, and Landing with State Machine

together amazingly well when I play games, I'm excited to learn more about making that happen.

I highly recommend the games workshops. They're a great opportunity to practice body mechanics and really focus on communicating clearly with every short clip. The workshops come with a game world setup and most of the configuration is already done. You can focus on doing awesome animation and



dropping them in, but you also get the chance to see how it all fits together.

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If you're interested in any form of interaction with the audience then this is a great introduction to the workflow — how to build pieces of animation, how a game engine blends them together. It's like building a big pose library of animations which can then be played at the right time. Jump in the game and just play… when you forget you're watching your animation and just enjoy running around, you know that hard work is paying off! ❖

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MEET THE
ANNIE AWARD-NOMINATED

HORIZON ZERO DAWN

ANIMATORS FROM
ANIMATION MENTOR

Q&A WITH GUERILLA GAMES ANIMATORS
ANIMATION MENTOR ALUMNI



PEER LEMMERS



RICHARD OUD

Horizon Zero Dawn *is one of our favorite games! So, we were ecstatic when we heard that three Animation Mentor alumni were nominated for Annie Awards for working on the game! We'd already caught up with* **rock star Guerrilla Games animator Niek Neervens**, *so this time chatted with Peer Lemmers and Richard Oud to learn more about their experiences. Without further ado, meet some of the incredible Annie-nominated animators behind* ***Horizon Zero Dawn***!

Animation Mentor: Were you both always interested in game animation? Tell us a little bit about your journeys after Animation Mentor.

Peer Lemmers: I think overall I've always just wanted to be an animator. I've never had a specific goal for the type of animation, because I feel that as an animator our main goal is to create believable worlds and characters no matter the situation—or in this case which genre.

I don't think, "Hey, I'm animating a robot for a game." I think, "What does this robot think and how does it react in a way that's relatable to human beings?" What makes the player go, "Dang that was intense!" or "That was really cool!"? I think our business is to entertain and communicate, and animation is our means of doing so. The idea of being typecast or stylecast or genrecast sort of bothers me, because I feel animation is about being creative and about coming up with ideas. I feel the best way to stay fresh is to tackle lots of different styles and genres because each time it forces me to rethink what I thought I already knew.

My journey after AM shows that, I think. I've worked in all corners of this industry at this point—from lonely remote freelancer to boutique shop to a giant corporate studio with 3,000 employees.

Richard Oud: I got into this industry graduating from art school with a mindset of wanting to work on feature films. I did my internship at DNA productions while they were working on ***The Ant Bully***, and I knew that was what I wanted to do as an animator.

After graduating with my bachelor's degree in computer animation, I knew my skillset was not up to the standards for feature film, so I applied for Animation Mentor to further develop my skills as an animator. Of course to be able to pay for the course I needed to have a job, but the industry was not that big in the Netherlands, besides Guerrilla

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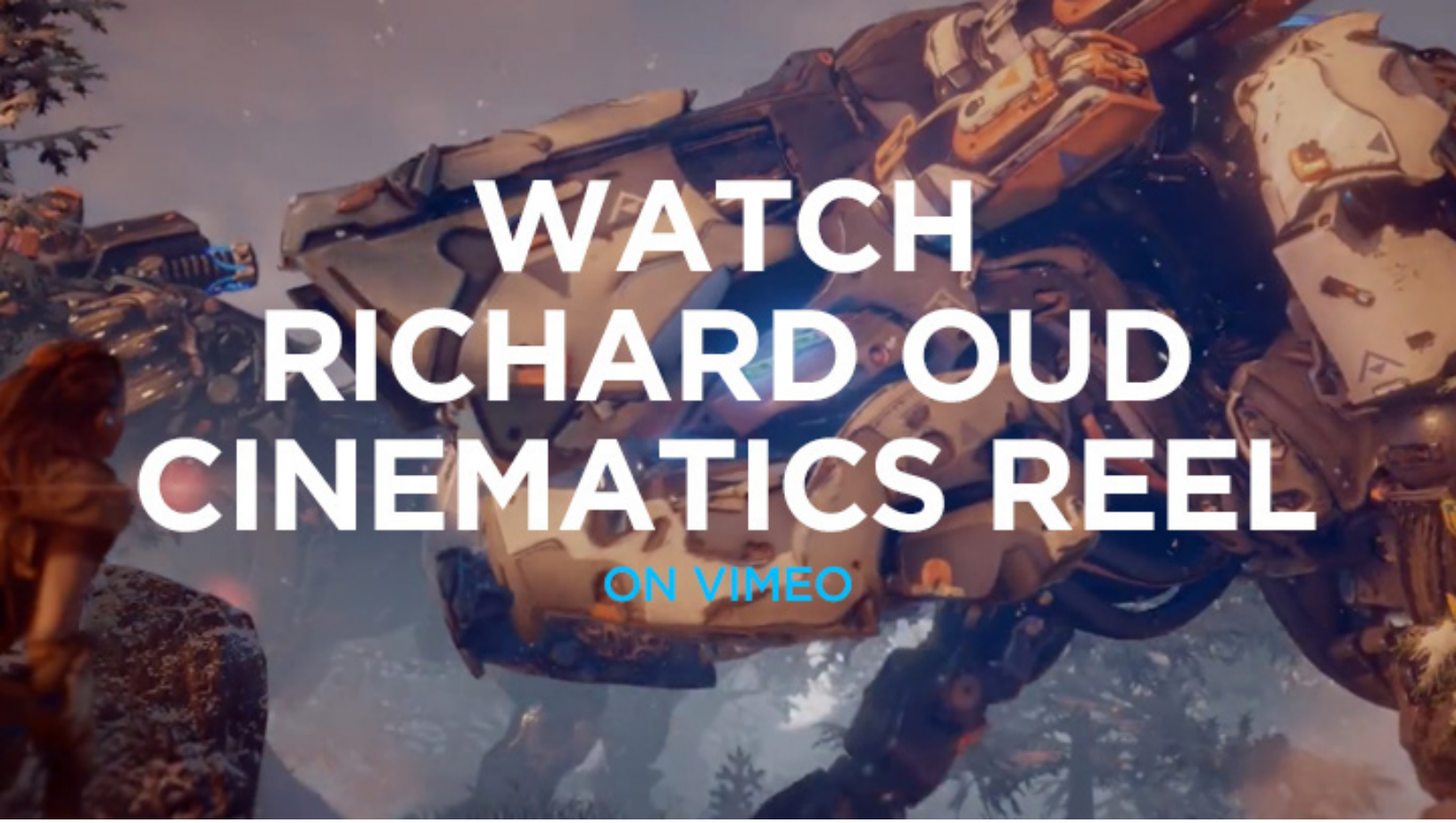

Games being the only AAA studio in my hometown of Amsterdam. I figured I would at least drop my demo reel that I had from art school to see if they would be interested, never thinking I would actually make a change. Crazy enough they asked me in for a job interview since they were looking for a junior animator, and I got hired the week after.

My plan at that point was to get at least some industry experience while doing Animation Mentor in the evenings and weekends so I could make the switch to feature film after 2 or 3 years. However, when I started working on games I instantly fell in love with the process and ended up never leaving Guerrilla.

AM: Richard, as an animator, what compels you about video games vs. other mediums like feature film or TV?

Richard: I love the process of creating the interactive experiences you get when playing games. I like the idea of making something where people get to spend hours and hours in a world that you helped create. There is such a nice satisfaction when making hundreds of animations for a character, and when you pick up a controller, you are actually able to play and walk around as that character or in my case fight the characters.

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In addition, the process of actually making games is very compelling to me. Instead of working on a shot for a couple of days/weeks until you are completely done, we get to work on a character for months or even years in this case building it step-by-step. It is a very iterative process where you focus on basic animations, first trying to build systems around it, and then polishing those animations on a much later stage when the game is much more balanced. It's all about the gameplay, and we have to make sure the players have a fun experience while immersing themselves into a world that is filled with believable characters.

AM: Peer, you've worked on live action films, fully animated feature films, TV series, and video games. What compels you the most about each? Do you have a favorite to work within?

Peer: This is tough to decide because I think each of these requires a certain skill set all on its own. I do know that by having done all of them has greatly influenced my workflow and my appreciation for lots of—in this case—unknown artists who simply have a passion to create and keep pushing no matter where they are.

Sometimes I run into animators where they say they don't want to work in games or tv—they only want feature film or vfx or they only ever want to work in games etc. I think this is a bit of a simplistic look, to be honest. When I worked in TV, it totally kicked my butt and I had just come from 5 years of film. Then I had to be super quick in my decision making and find a new skill set and workflow that gave me time to still make it look decent. I had to juggle 900 frames a week for myself plus lead a team of upcoming animators who had to double that.

TV is hard work, but then to say that film is easy because 200 frames per week must be easy? No. Film requires a more elaborate idea and such refined performance and polish that it is actually quite intense.

And games? Games are pretty humbling, because most of your work is creating smaller transition animations such as turning left, turning right, or jumps, etc. The fancy combat moves are not the largest part of the work. Games are sort of special as everything has to be created, more so than in feature film. In games your animation becomes part of an interactive system with AI. So when you have an idea for a new animation, it ripples across to many other people and other departments that you cannot

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simply add or change things at random, which leads me to VFX .VFX, I feel, is a combination of all three of the previous—it's hard work, it's humbling, shots get changed all the time so you must have a flexible mindset. VFX requires exceptional body mechanics but also an understanding of characters and performance.

Your blocking needs to be much more refined in VFX vs. feature animation, as you're working with live background plates with real spacing and timing—and usually live action directors who do not necessarily know how to interpret stepped mode blocking. So there's a necessity for speed as well.

I think overall for all of these, the bar is being raised in production quality and animators now have to have a better skill set than what I had 10 years ago. So if you don't land your dream studio or genre job right away—and if you want to be a good strong animator with the ability to last for the long run—just animate as much as you can on whatever you can. There's fun to be had in all genres. In the end my fondest memories are of the people I've worked with.

AM: What kinds of shots/characters/creatures did you guys focus on for *Horizon: Zero Dawn*? Or did you get to do a bit of everything?

Peer: I came in a bit later and most of the creatures had already been blocked in, so the game was already up and running. My job was mainly to polish up existing animations or to create new versions within that template that the blocking stage had already provided. So I pretty much touched every robot in the game with exception of two or three.

There was really only one robot that had not been done yet, which was the Deathbringer, or old school war robot, on six legs. It went through heaps of changes even as I was working on it and took up quite a bit of my time, especially with it being omni directional and having six legs. In the end, it mostly walks around and shoots stuff at players but there were lots of attempts to have him do more crazy things—they simply never felt true to the character, so most of it didn't make it into the game.

The other character I really enjoyed was the croc, Snapmaw! I had a lot of fun animating that one, as his build and silhouette with the long tail and long beak allowed for some fun animation stuff.

Richard: After finishing ***Killzone 3***, I was part of a small group within

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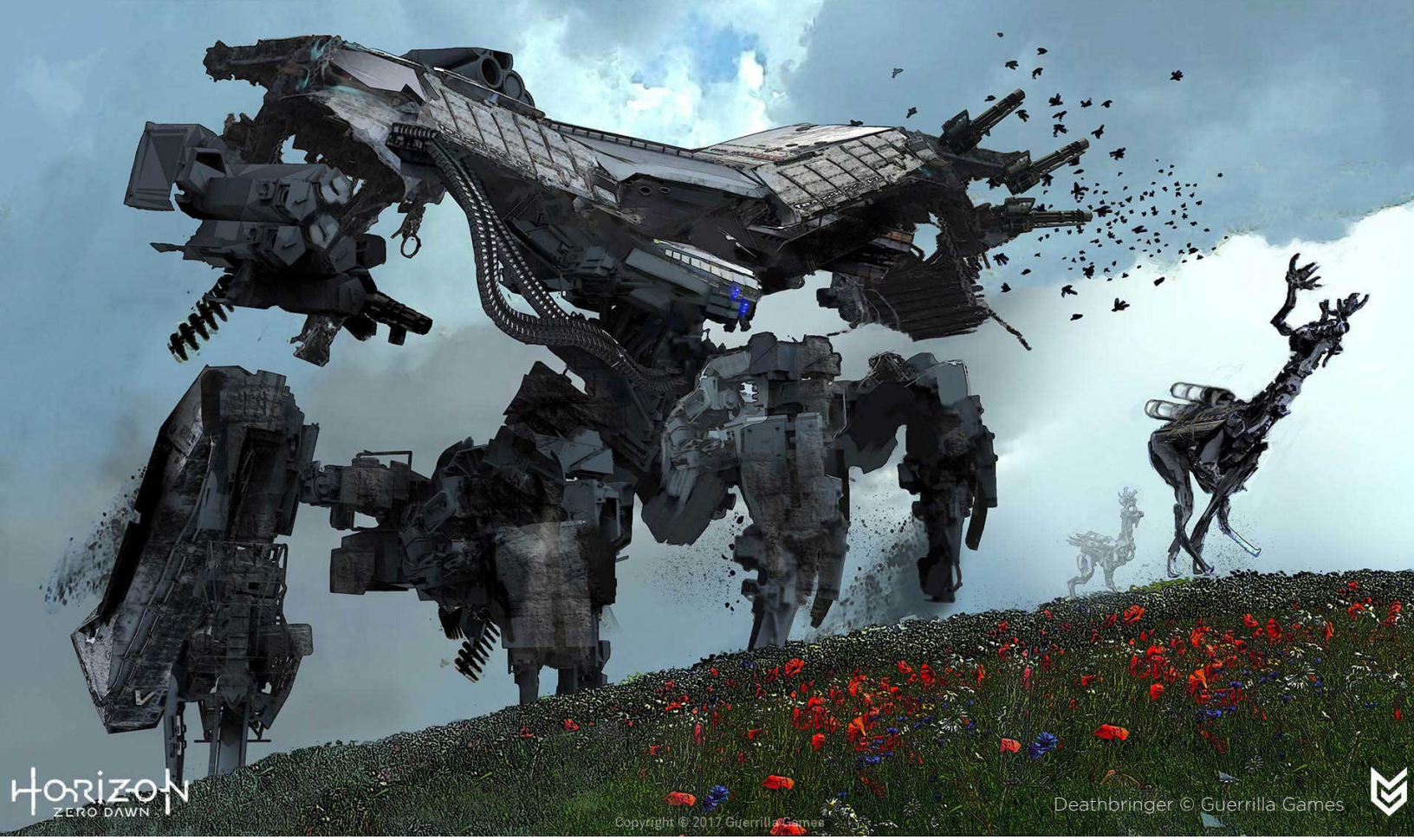
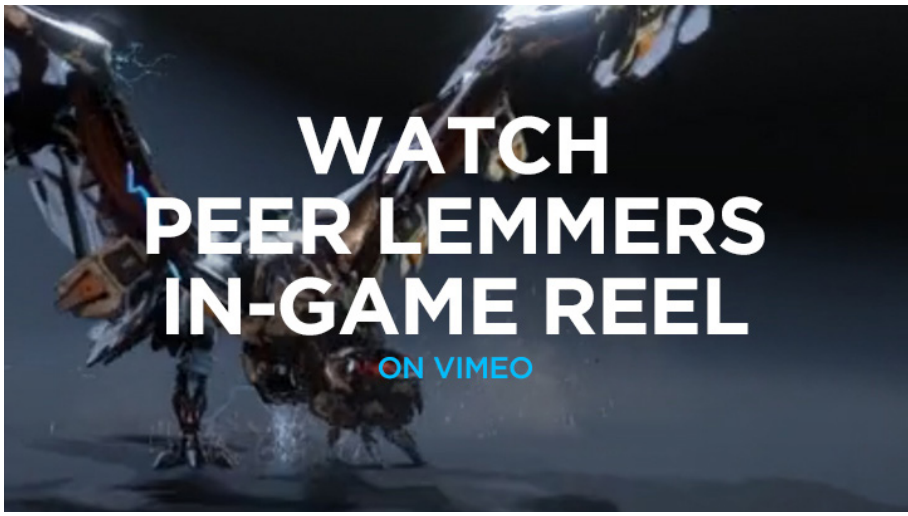


Guerrilla that started to develop ***Horizon Zero Dawn*** while the rest of the studio was working on ***Killzone: Shadow Fall***.

From the start, I was assigned to flesh out the animalistic robot creatures of the world, and I kept working full time on all of them until we finished the project. So instead of focusing on one character, I worked on all 25 robots in the game, including cinematics and commercials every once in a while.

AM: What were your favorite parts about working on *Horizon Zero Dawn*?



Peer: I had a lot of fun with creating attacks and testing them in the game environment. It was really cool to take your animation and then use Aloy, the main character, to shoot at them and watch how your animation on the robot would become interactive. Your character or creature starts to get a personality

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Snapmaw © Guerrilla Games

through the combination of all that separate animation now coming together. Also the team generally has a good sense of humor, which makes long days go faster .

Richard: The amount of diversity in the robot creatures that we got to work on, trying to give each their own personality and feel as you engage with them. It was also a lot of fun to come up with a mix of animals we wanted to incorporate into each robots, seeing what would work well on the design of a robot.



Also, since the ***Killzone*** franchise was pretty much established when I joined Guerrilla 10 years ago, it was such a great experience to be creating something new from the ground up that we had not done before. That made the game super exciting and motivating to work on.

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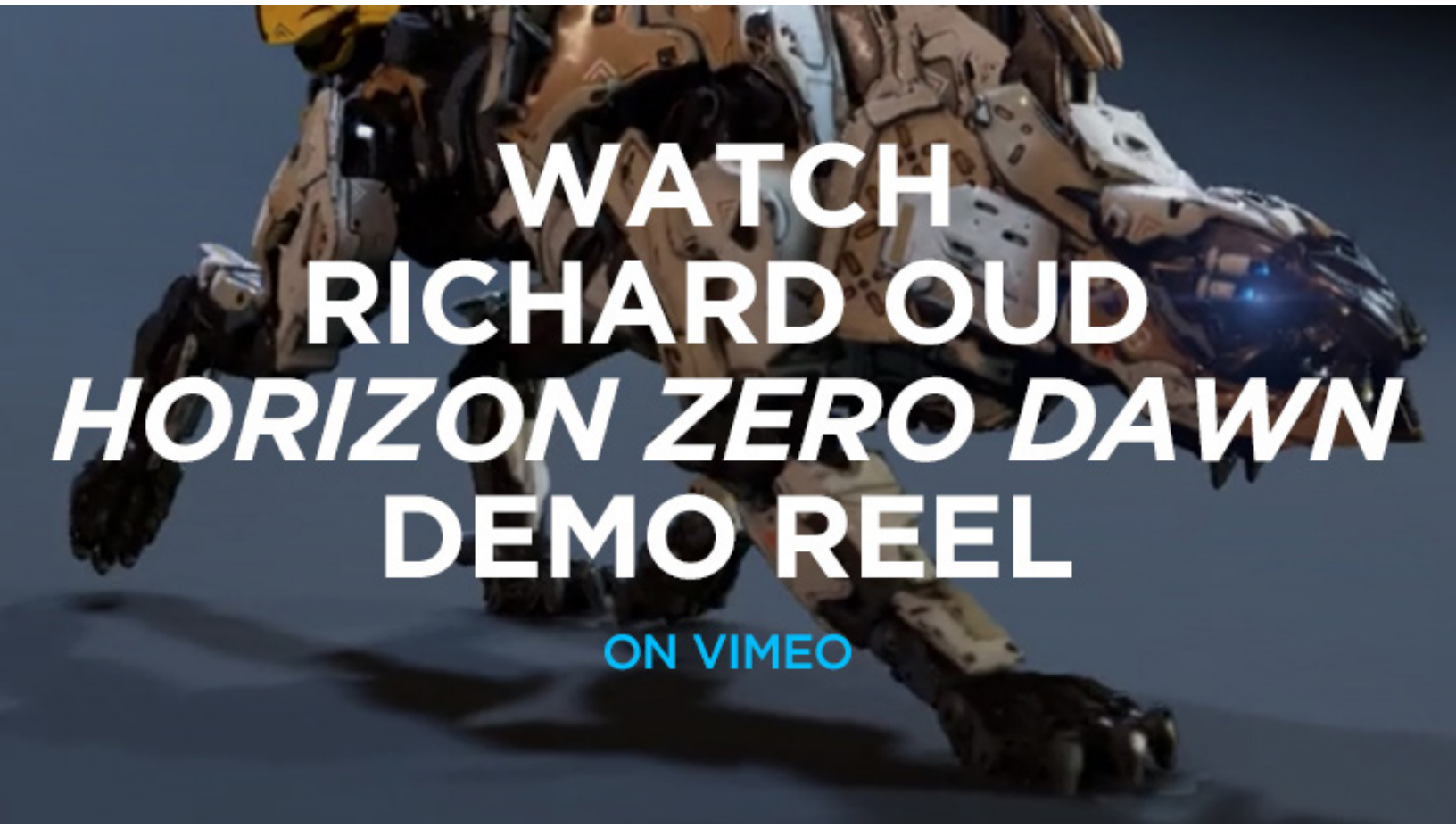
AM: Is it fun to play the games you've worked on, or do you just find yourselves thinking too much about all the behind-the-scenes stuff?

Peer: Well in this case I'm not skilled enough to play ***Horizon Zero Dawn***. Haha. I'm too much of a strategy, turn-based game player, I guess. I tend to run and hack my way through, which only lets you get so far. The best part for me is always when I can share my work with my family and watch them play and watch how they react to it. If they smile and enjoy it, it makes me happy.

Richard: The weird thing is that you're so busy developing your part of the game (in my case the robot creatures) that you don't see a lot of things of the entire world being created until the game actually ships.

Since the world of ***Horizon Zero Dawn*** is so big, it's almost impossible to keep



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playing the game while having to animate all the creatures at the same time. So getting to play ***Horizon*** after it shipped was kind of like my first time fully exploring the world as well, which was really nice to see everything come together after you've been working on it for so long.

Of course I always see animation on the robots where I think, "That could be a whole lot better," but I don't think there's an animator out there that doesn't feel like that about their own work.

AM: How did Animation Mentor help prepare you for your careers?

Peer: Without AM I would really never have done any of these things. In Holland there is nothing that can prepare you for working in character- and performance-driven animation. I remember starting AM and just wanting to soak it all up as much as I could. I watched every lecture two or three times and spend as much time as I could trying to learn this craft. I feel the mentors and community it provided me back then were invaluable, and I've actually ended up working with a lot of them and still have contact with quite a few.

Richard: The character course really helped me to shape up in terms of foundations. It's one of the things

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we're pretty focused on in within the animation department, making sure the right timing/spacing/rhythm and weight is on each animation. It really helped me develop my eye for good animation.

The Creature Animation Workshops came at the right time as well. I had never animated a quadruped in my life when I started to work on ***Horizon***, and at the same time Animation Mentor started the Creatures Workshops, which were a perfect fit and helped me get those fundamentals needed to animated the robots.

AM: What advice do you have for students interested in going into video game animation?

Peer: Animate as much as you can and keep an open mind. We all go through the same learning struggles as animators, it's the people who stick with it that you end up reading about and working with later on.

Richard: Work very hard and focus on the fundamentals. A lot of our work is based on having a great understanding of body mechanics, creatures or humans. It's bound to happen—you're going to have to animate something that you don't have reference for, or are not able to record. Those are the times that you have to fall back on your knowledge of the fundamentals, both in the animation principles and body mechanics.

Also try to stay away from the obvious solutions or references and approach your work from a fresh new angle. This helps your work stand out and trains you in your workflow to keep doing something original.

Last but not least, keep learning and stay inspired. Whether it be with a good book, a documentary, a great movie or just by going outside and taking a walk watching the world around you. It's so important to stay fresh and motivated, so figure out what works for you and remind yourself to stay inspired.

Be sure to check out our **Q&A with Niek Neervens**, *another Annie-nominated AM alumnus who worked on* ***Horizon Zero Dawn***! ❖

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WHAT SEPARATES A GOOD ANIMATOR FROM A BAD ANIMATOR?

BY: DANA BOADWAY MASSON
ANIMATOR
ANIMATION MENTOR
MENTOR

What separates a good animator from a bad one? While the answer might be somewhat subjective, animation supervisors have a very clear idea of what they're looking for! Learn more about how to be on the good end of the spectrum from all-around pro Dana Boadway Masson, owner/director at Killerjellybean Animation.

A good animator will put the work in, not only to make the movement work, but to make the poses interesting, visually appealing, and to connect those poses to the character's acting and emotion.

I would say, from a supervisor's point of view, that a good animator is one who shows great attention to detail and won't hand in work that is clearly mediocre or worse, accompanied by a myriad of excuses. They are aware of the thought processes of the characters they are animating, and are conscious of communicating that to the audience.

A good animator creates interesting rhythm in their shot, and isn't afraid of using moments of stillness to accent both the rhythm and the communication.

There are also some elements of detail that I find really separate good animation from bad. One element is shoulder movement. Bad animators will not use the shoulders very much in their animation, when in reality, shoulders have a huge amount of articulation and really connect the arm movement into the torso movement. I've seen lots of stiff or non-existent shoulder movement in bad animation.

Good hand poses are another element that take good animation to the next level. Hands are incredibly emotive and communicative, but it is also painstaking to animate all those digits. A good animator will put the work in, not only to make the movement work, but to make the poses interesting, visually appealing, and to connect those poses to the character's acting and emotion.

Other than those particular things, it's just a mastery of the principals of animation—paying attention to all of the elements that make a great shot! Great posing, great timing, body mechanics, great character acting (and this is something

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> I've seen lots of stiff or non-existent shoulder movement in bad animation.

that is very difficult—mastering the body language and personality of a particular character versus just moving a character around generically).

Something I can't emphasize enough is the importance of having strong body mechanics. Whether you're going more realistic or more cartoony, if the body mechanics aren't "buyable" the character will never really take on life.

> A good animator creates interesting rhythm in their shot, and isn't afraid of using moments of stillness to accent both the rhythm and the communication.

If they don't have that illusion of life, that makes it very difficult for the audience to empathize with them, and it will be much much harder to draw the audience into the story and maintain the suspension of disbelief. ❖

Read more of Dana's wisdom:
Choosing the Best Poses for Your Acting Shot
Exaggeration: The 12 Basic Principles of Animation
Facial Animation 101

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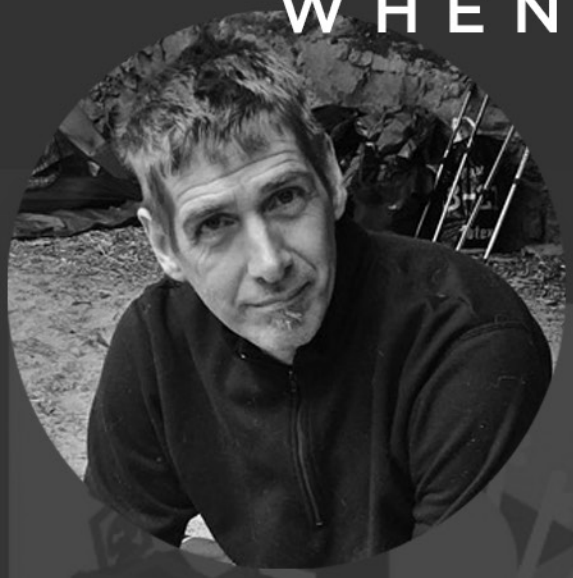
HOW TO MAXIMIZE YOUR PRODUCTIVITY WHEN ANIMATING



BY: DAVID TART
ANIMATOR
ANIMATION MENTOR
MENTOR



Animation is a time-consuming art form—there's just no way around it. Something that many people don't understand when they first get into animation is that the quality of a shot is directly related to available time. So what do you do when time is limited? How do you squeeze the most productive time out of your week? Learn top time management tips from David Tart, animator for ***Toy Story***, ***Monster's Inc.***, and ***Finding Nemo***!

The level of detail, the amount of planning, and the implementation in a complex program like Maya all take time, especially if you want to create great-looking work.

Something that many people don't understand when they first get into animation is that the quality of an animated shot is directly related to available time. For instance, an animator who's responsible for finishing 4 seconds of animation per 50 hour week is going to create much better looking animation than an animator who's responsible for finishing 40 seconds per week, even if they have essentially the same level of skill.

So time, and how you use that time, will be directly related to the quality of your finished shots. So how can you squeeze more time out of a week to create better quality animation?

Below I'll list some ideas and tips that I've personally found incredibly helpful.

Creating Focus, or Flow

The psychological state of "focus", or "flow", is a time where you are incredibly focused on your tasks and able to get a maximum amount of great work done. When you achieve this level of focus, time is no longer relevant. You may have experienced this state yourself – it's when you're working on a specific task. You look up at the clock and an hour or two has passed, but it felt like only 10 or 15 minutes. Psychologists have researched this state of mind thoroughly and identified it as one where we are at our peak level of productivity. Our ability to create, to problem-solve, and crank out good work is at it's maximum potential.

Research shows that it can take between 10 and 15 minutes to achieve the flow-state, while it can take only a minute to end it. This means that you want to plan your work time so that you have minimal interruptions, because these interruptions terminate flow.

For instance, if you set aside 3 hours to work on your animation but stop

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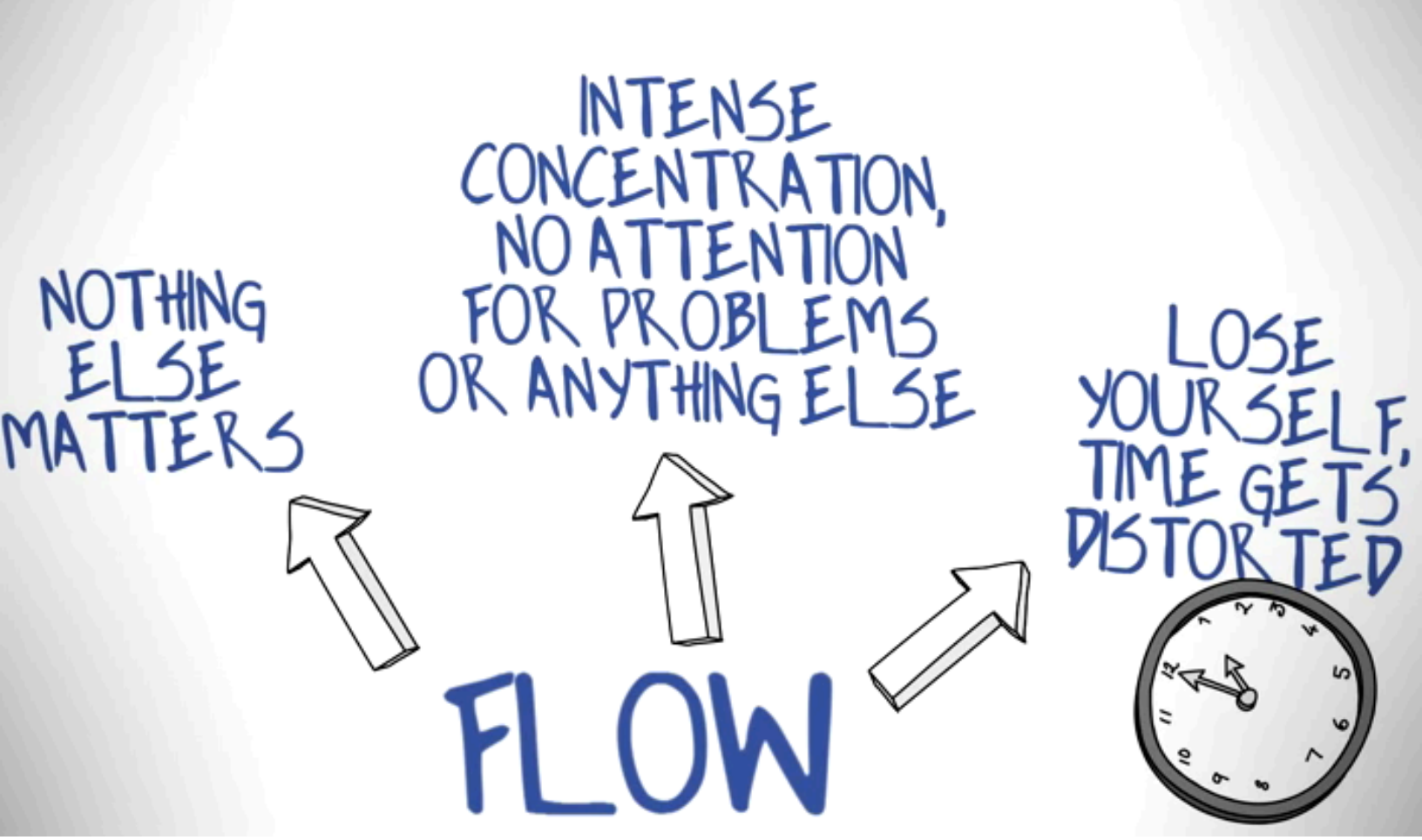

working to check your email, make a facebook post, shop online, talk to a friend, get some coffee, etc. eight times during that 180-minute period, you will have spent 80 to 120 minutes of potential flow-state in less-than-productive conditions. Sure, you'll still get stuff done but nowhere near as much you would have without those breaks.

Creating the Space to Do the Work

At the beginning of each week you should sit down and take a realistic look at your calendar. Doing good work at Animation Mentor requires anywhere from 10 to 40 hours per week. Take a good hard look at that calendar, then block out sustained chunks of no less that two-hours each. Let friends and family know that you won't be available during those periods.



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When those two-hour periods arrive, put your phone on silent mode. Close your facebook browser. In fact, close all other applications on your computer. There is no need to do anything other than animate. Make sure you have something to drink. Feed the dog. Put your pet bird to bed. Basically make sure to weed out any and all possible distractions. You can listen to music, but make sure it's something that you won't want to pay attention to.

Planning

We all hear it from our mentors, week after week. Planning, planning, planning! So you already know it's important. But as it relates to your productivity, it may be even more important than you think! In fact, there is no bigger waste of time than starting to block or animate a shot that you have not fully planned.

I'll say that again: there is no bigger waste of time than starting into blocking or animating a shot you have not fully planned.

There are many reasons for this, but the biggest reason is that maya is really just a drawing tool, when it comes down to it. It's not at all good for "trying things out" because of the complexity and time-consuming interface. When you begin your blocking, you should understand every detail of the animated performance you are about to create. This means you understand the physicality, silhouette value, balance, and **appeal** of every single key pose from the fingers down to the toes (this should be present in your thumbnail drawings).

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This means you understand when and where you'll implement anticipations. You understanding the timing for each action—how long it takes to move from one pose to another because you already timed it out with a stopwatch. You have a good understanding of what type of in-betweens you'll create. You know when and where you'll implement **squash and stretch** frames, where overlaps will occur, when to use overshoot and settle . . . and so forth and so on.

You might think this sounds like overkill, but believe me, if your approach is anything less than this, you're not animating . . . you're just playing around in maya and wasting time. When you are in the first pass phase of animation, you should never find yourself thinking "I wonder what the **timing** for this movement should be". Rather, you should be thinking "Oh, I remember this action—I wrote the timing down in my planning. It was 7 frames". I can't tell you how much time I've wasted myself by not thoroughly planning. And remember, it's not just about saving time: any time you thoroughly plan your shot, the animation is guaranteed to come out better.

Playblast n' Tweak

Many people ascribe to the "playblast n' tweak" method of animation, which basically means trying to fix something without really having figured out what the problem is, then playblasting to see whether or not it worked. While you may feel like you're working, actually the computer is working, and more importantly, you are breaking your hard-earned state of flow. Don't playblast until you've completed your to-do or fix list. I try to make sure I have at least 45 minutes worth of work to do in between playblasts. See "Making To-Do Lists" for the specifics.

Making To-Do lists

This is probably one of the most important ways to maximize your productivity. Making to-do lists requires your full focus and your critique abilities. The idea is that you want to avoid spotting problems in a random manner, then implementing questionable fixes— i.e.., "Well, I'll try this, then playblast it and see whether or not it works". This is not animating, this is goofing around or desperately hoping for the best. Real animators can identify problems, when they occur, and how to fix them before doing anything about them. This will save you hours and hours of time and create an opportunity

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for you to get into a "flow state"—that focused period of time where you are operating at top efficiency. Here's how to do it:

1. Make a playblast.
2. Set your movie player to "loop"
3. Start identifying random issues—timing issues, weight issues, "pops", spacing, ease-ins/outs, 2D arcs, overlaps . . . in general, use the 12 principles of animation as a measuring stick to see where your animation is not meeting these rules. Write them down on a piece of paper in no particular order.
4. After coming up with a list of 10 or 15 things that need your attention, watch the playblast again. For each item on your list, write down the frame number or frame range in which the issue occurs.
5. Next, write down each problem you identified as a *solution* – i.e.., "The arm has an issue with the elbow from frame 17–23" becomes "The screen right arm needs to have the RX adjusted in the upper arm joint". Or "The pelvis looks floaty from frame 134–147" becomes "The COG needs a 2D arc, and the ease out adjusted on the translates from frame 134–147".
6. Finally, prioritize the issues by hierarchy. Because of the hierarchal nature of posing and animation in maya, there would be no sense in adjusting the 2D arc of an arm before adjusting the rotation of a joint in the spine, since you'd just have to redo the arm if you adjusted it before adjusting the spine.

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Your final list might look something like this:

1. Body looks weightless from frame 10–19. Add 2D arc, adjust tilt of pelvis, and give some overshoot and settle. PRIORITY 1.
2. Blink looks weird, frames 38–43. Timing of the blink is early. Move blink to start at frame 41. PRIORITY 3
3. When character looks toward screen right frames 49–56, something is off. Need to lead head turn with the eyes by 2 frames. PRIORITY 3.
4. Pose from frame 3–12 looks off-balance. Rotate main controller in Rz to make character more vertically posed over the legs. PRIORITY 1.
5. The legs are popping at frames 18, 126, and 134. Adjust Ty of main controller. PRIORITY 1.
6. The arms feel like they are rotating in a way that doesn't feel connected to the body, frames 81–88. Add rotation in the torso and clavicles to make arms feel more physical. PRIORITY 2. etc.

Armed with this list you can now not only achieve the flow-state, but you can animate with purpose. Go through your list, fixing each issue by priority level. Playblast, then DO IT AGAIN.

Taking Breaks

We've all been there (or you will be soon): it's 11:00 pm, you've been working on your shot for the past 4 hours, and it doesn't look much different than when you started 4 hours ago. You keep looking to see what's wrong, you keep trying to fix it only to break something else in the process and go back to a saved version of the shot. You've looked at the shot so long you can't even tell what's wrong anymore! You're feeling stressed, pressured. You simply HAVE to get some work done!

And this is exactly when you should save your file, gently reach for the power switch on your computer, and shut it off. It's time for a break. Not a 5-minute break, but an hour or more—or maybe it's even time to quit for the night. Get up. Get away from the computer. Take a walk. Go hang out with some friends. Go to the gym. Physical exercise is best, since you've been sitting so long, but the most important thing you need is distance between you and your work. Forget about it. Remind yourself that you'll get back to it, and that everything is going to work out fine.

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As with "focus" or "flow", stress can greatly affect our creativity and problem-solving abilities. Studies show that the right amount of stress can benefit our efficiency and work ethic. We should have some amount of concern about our work. But too much concern can basically shut down our thinking processes. Instead of seeing the work, we live in our fear and judgments…we spend time thinking about what will happen if we don't finish or what it means that we can't figure out a solution to the problems that need fixing.

So the next time you find yourself worrying more about the deadline than what's happening on the screen, take a break. You deserve it!

Switching Tasks

If you find yourself trying to fix a problem over and over again with no success and you're not ready to take a break, switch tasks. For instance, if you've been trying to figure out why that pesky elbow keeps popping for the past 30 minutes and it's still popping, then drop it. There's always something else to work on, so switch over to working on refining your hand poses or do some facial animation. My personal favorite go-to is lip sync, which for some reason I can do fairly easily. Or if you're lucky enough to be working on multiple shots at the same time, just close the one you're having problems with and start out fresh on the other. You won't regret it, and you might find that the next time you open that problematic shot, the solution was right in front of you the entire time—it happens more often than not.

Reducing Mouse Clicks

One of the things I do when I come into a new studio to supervise animation is ask animators to describe how they work—What steps do they take in their workflow? How do they plan, block, first-pass animate and polish? And as it relates to efficiency, what keyboard shortcuts, tools, and mel scripts do they use? My goal is to reduce mouse clicks, and this turns out to be relatively easy to do.

Imagine that in a typical 40-hour work week, you click and release your mouse 10,000 times. If you can identify repetitive tasks—and there are so many when animating in maya—it's quite possible to reduce your mouse clicks down to 7,000 or 8,000. This may not seem like a big deal, but it is! Essentially, you save a whopping 20% of time, or 8 hours per week. You literally create more time where there was none before.

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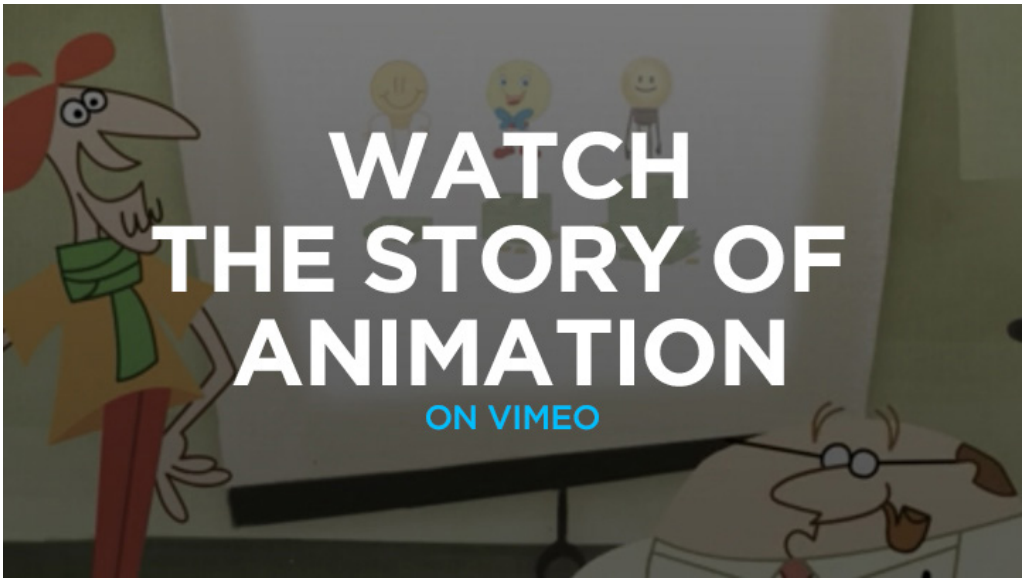
There are so many great tools that Animation Mentor has that you can use already. Many people never bother to use them, mainly out of the fear that it will "take time" to learn them, and who has time when your shot is due! But make a commitment to yourself to reduce your mouse clicks. Learning these new tools or keyboard shortcuts may take a small amount of time, and you'll need to force yourself to keep using them, but you won't regret it!

Creating Work Spaces on Maya

Organizing your desktop display is super important. I can't tell you how many times I've seen new animators clicking away on their screen—resizing windows, opening and closing windows, bringing windows to the front, minimizing, maximizing, or just endlessly rotating a perspective camera. Make no mistake, this is NOT animating: it's just fussing around with a computer interface.

To avoid this waste of time, you'll want to make sure you have a few layouts saved that you use for specific tasks. One might be your main_cam or shot_cam window, another a perspective view for selecting nurbs curves, and another with the graph editor. Another might be a face_cam, perspective, and graph editor, if you're doing facial animation. Set the preferences for your heads-up display so your windows are filled with visual clutter.

Now go forth, animators, and work smarter not harder. Also, be sure to check out David's short film, ***The Story of Animation***! ❖



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I'LL NEVER BE AS GOOD AN

ANIMATOR

AS SO AND SO...



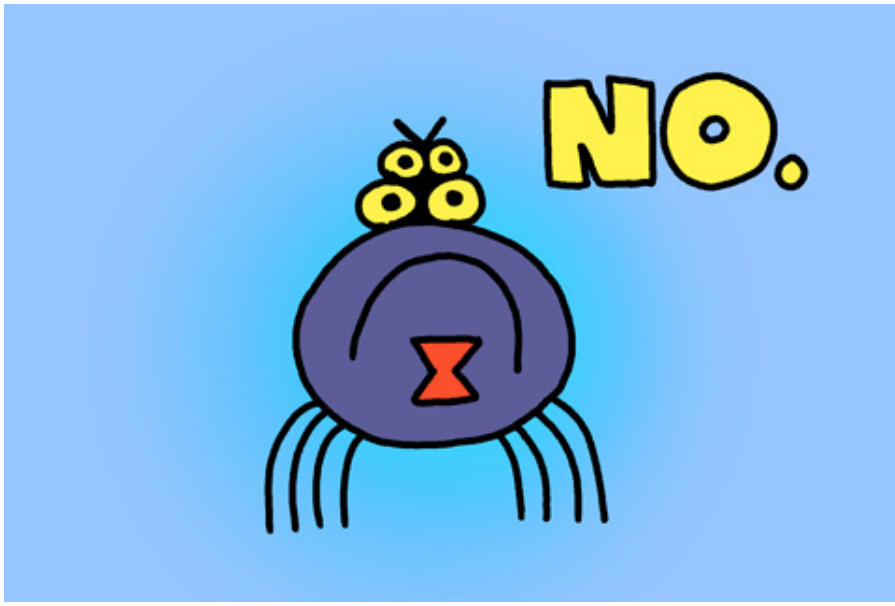
BY: SHAWN KELLY
INDUSTRIAL LIGHT & MAGIC
ANIMATION SUPERVISOR
ANIMATION MENTOR
CO-FOUNDER

Sooner or later—usually sooner—someone is going to come along and blow you out of the water. But that's a GOOD thing! If you're in that situation, I sure hope you use it as an opportunity to refocus and learn what you can from your new peer in order to push your animation game to a whole new level.

I have news for you guys. There's always going to be someone better than you. Always.

That's never going to change. I bet I could line up my all-time dream-team of favorite animation heroes and ask if they are the best animator they know, and I could almost guarantee that they'd all blanch and point the finger to dozens of other animators they feel are better than they are. The art is simply too complex, too deep, too much in a state of constant evolution, and too global to ever "be the best." It just isn't going to happen.

Can you become the best at your studio or school, though? Sure, I guess, but not for long.



Sooner or later (usually sooner), someone is going to come along and blow you out of the water. But that's a GOOD thing! If you're in that situation, I sure hope you'd use it as an opportunity to refocus and learn what you can from your new peer in order to push your game to a whole new level.

I understand the concern a lot more at the student level, however. It's scary enough to be an art student in any kind of art because again, someone is always better than you are, only now you're in an environment where you're already wondering if you'll ever be able to make a living at this, or worrying that you

> The point is, we're all at different levels, and that's normal.

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are wasting a lot of time and money on something you may never truly be outstanding in.

That's totally normal to feel that way, and I bet that most animation and art students have felt that way at some point.

What you need to realize, is that all the artists you are in school with are at different points in their learning path. Some people are slower to pick up on certain ideas and techniques.

Some people have more experience than others, and come into a class with a much more developed background in the art. A very lucky and very few people are just amazing prodigies right out of the gate.

The point is, we're all at different levels, and that's normal.

I used to be pretty decent at drawing. Now I'm awful and completely out of practice after a decade of drawing nothing but stickmen planning poses.

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I've been thinking about going and taking a figure drawing class sometime to ease back into it, because I do miss it. When I do, I will know without a shadow of a doubt that my drawings are going to be among the worst in the class. There will be people who are incredible, there will be people even worse than me (if it's a huge class, maybe!), and the vast majority of us will be somewhere in between.

believe that drawing, like animation, is a learned skill. With the proper motivation and dedication, ANYONE can learn to draw. That doesn't mean just anyone can be Picasso or Glen Keane, because those are artists applying a piece of their soul to their technical skills to raise their art to a level far beyond what the rest of us will ever accomplish. But anyone CAN learn to draw really well and can learn all the techniques and so forth, just as anyone CAN learn animation.

> Any time you're learning ANY art, one of the most important things to get over is the fear of looking silly.

But I'll be in there to LEARN. I'm not in there to compete with them. I'm not going to let myself feel too embarrassed about having to hang my lumpy uneven shrunken-headed poor anatomy slightly-alien-looking figure drawing on the wall next to the masterpiece drawn in two minutes by the girl sitting next to me. I'm there to learn, and any time you're learning ANY art, one of the most important things to get over is the fear of looking silly. The fear that people are pointing at your work and giggling.

The fear that you just don't measure up, and won't ever be as good as so-and-so.

I have no doubt, that if I truly applied myself, I could someday be as good as the teacher in that figure drawing class. It just might take me a lot more years to get there than that girl who was sitting next to me whipping out masterpiece after masterpiece.

But that's OK! It's normal. It's expected. And regardless of what you think, no one is giggling behind your back at your work…

They're all too busy worrying about everyone else's reactions to THEIR work! icon smile I'll never be as good an animator as so and so...

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So, will you ever be as good as the best animator in your class? Maybe. Maybe not. Everyone is born with different skills, different dreams, etc. Animation is a competitive field. You're kidding yourself if you think otherwise. School can feel very competitive if you let it, and it only gets worse when you graduate. Jobs are very cyclical, sometimes everyone is hiring, sometimes hardly anyone is. I understand the fear. I understand the concern.

The hard truth is that not everyone who reads this will have what it takes to sustain a career in such a competitive field. But I really believe that "what it takes" has a whole lot less to do with natural God-given talent, and a whole lot more to do with tenacity, patience, dedication, and retaining a constant hunger to learn.

If that describes you, then someday YOU'RE going to be the one everyone complains about being so untouchable, no matter where you are at in your path right now.

For more of Shawn's wisdom, be sure to check out his post: **Is Your Demo Reel Ready for a Major Studio?** ❖

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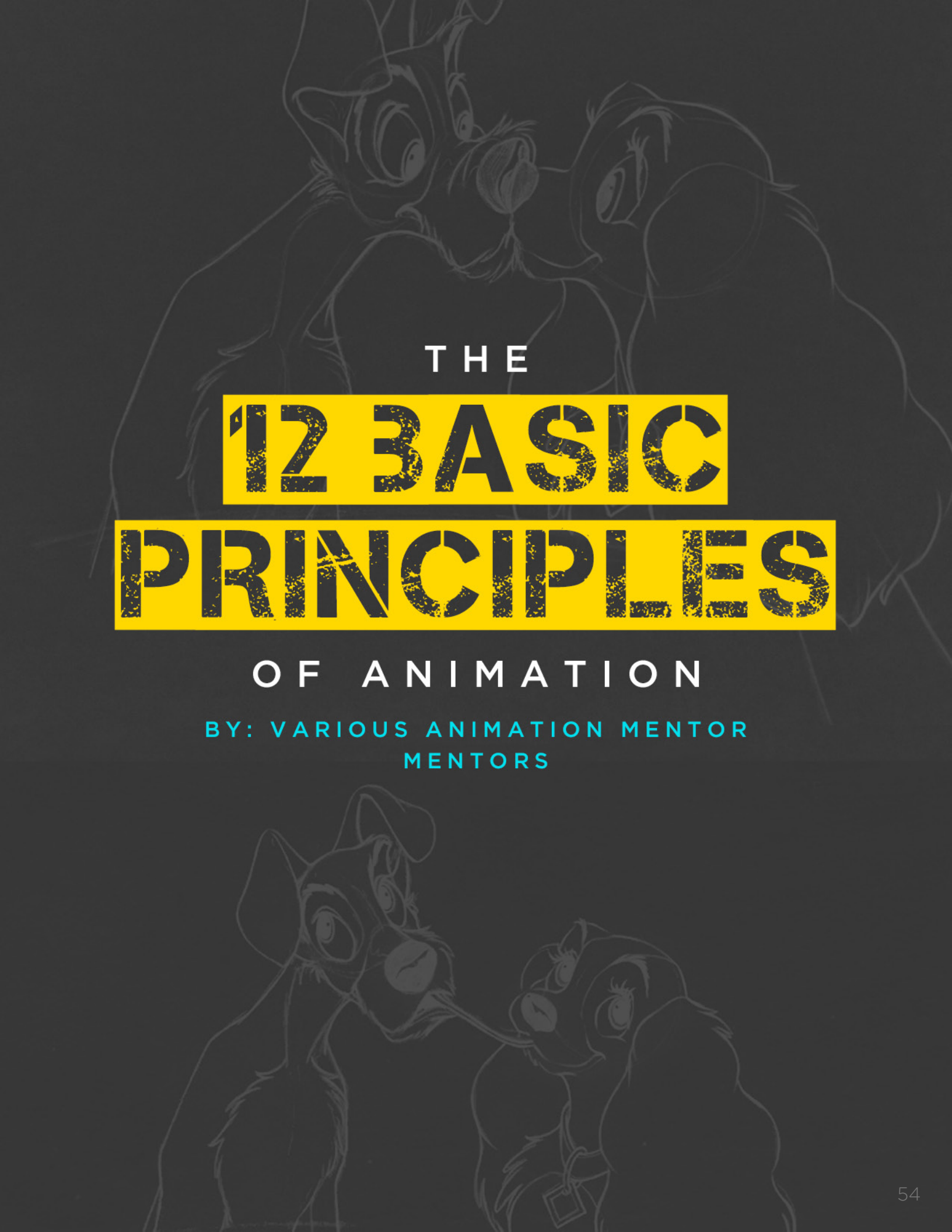

THE 12 BASIC PRINCIPLES OF ANIMATION

BY: VARIOUS ANIMATION MENTOR MENTORS

The Twelve Basic Principles of Animation are essential "guidelines" created by Disney animators Ollie Johnston and Frank Thomas for their 1981 book ***The Illusion of Life: Disney Animation.*** We put guidelines in quotes because, in a way, all rules are made to be broken, but in order to break those rules you first have to master them!

To master to the Twelve Principles as an animator, you're essentially learning how to think about your character as adhering to the rules of physics while also considering equally important topics like the character's appeal and the timing of your shot. So, how do you go about using your knowledge of these principles in your work? How on earth can you keep track of all of these, and what's the best way to approach them once you know them?

We asked our mentors to share the ins and outs of each principle—complete with examples and advice on how to best approach it to become a better animator. So read up all at once, or space them out over a few weeks so you're sure to absorb each principle. Most of all, take notes!

- Principle 1: **Squash and Stretch** by Chris Hurtt
- Principle 2: **Anticipation** by Chris Hurtt
- Principle 3: **Staging** by John Nguyen
- Principle 4: **Straight Ahead Action and Pose to Pose** by Leigh Rens
- Principle 5: **Follow-through and Overlapping Action** by Drew Adams
- Principle 6: **Slow In and Slow Out** by Kevin Koch
- Principle 7: **Arc** by Anthony Wong
- Principle 8: **Secondary Action** by Kevin Koch
- Principle 9: **Timing** by Dave Burgess
- Principle 10: **Exaggeration** by Dana Boadway Masson
- Principle 11: **Solid Drawing** by Jay Jackson
- Principle 12: **Appeal** by Ethan Hurd

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Our Courses and Workshops

Animation Mentor offers 12-week courses and 6-week workshops on a wide variety of animation disciplines. Whether you're looking to focus your skill set, build out your generalist skills, or just try something new—we've got you covered. If you're a beginner, our core Character Animation Courses will get you started on your journey to becoming a professional animator.

Character Animation Courses

12 Week Courses

AN01 Animation Basics

In Animation Basics, you'll go beyond software to learn how to realistically convey weight, motion and follow through – critical skills on your journey to become a character animator.

AN02 Body Mechanics

In Body Mechanics, dive deep into the physicality of animating full body walks on both human and animal characters with our Stella and Sloan rigs. Begin by honing your observational skills and understanding of human and animal anatomy.

Prerequisites: AN01 or Advanced Placement

AN03 Advanced Body Mechanics

In Advanced Body Mechanics, you will animate more advanced physicality with your characters. Pick a character and create your own sequence, using cuts to help tell your story.

Prerequisites: AN02 or Advanced Placement

AN04 Introduction to Acting

In Introduction to Acting, you tackle two of the most challenging aspects of character animation: pantomime acting and animating dialogue.

Prerequisites: Either AN03 or Advanced Placement

AN05 Advanced Acting

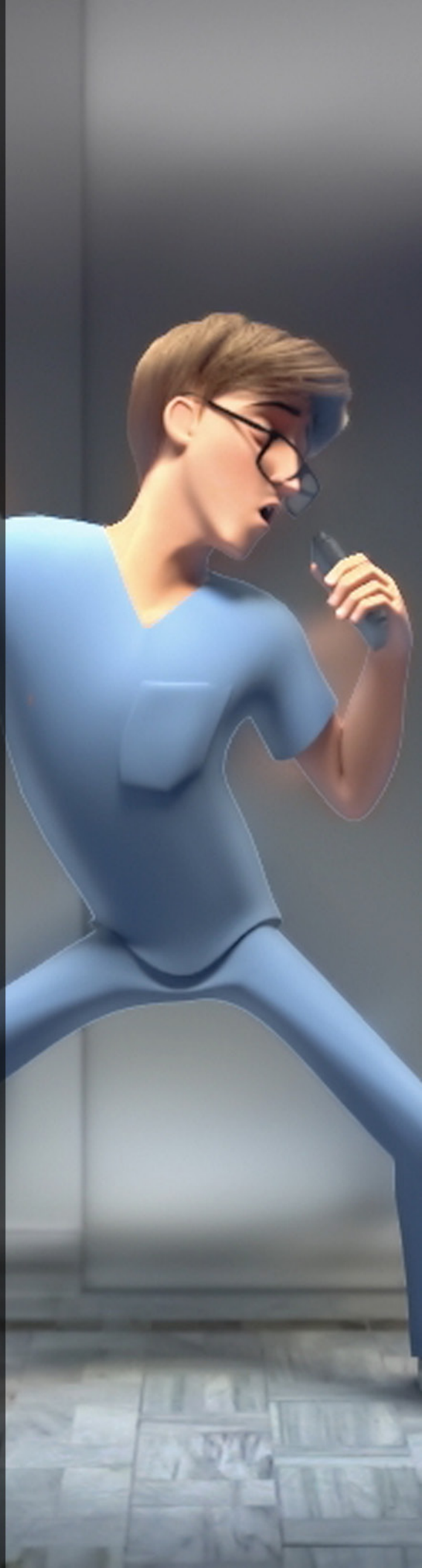
In Advanced Acting, you get your first taste of how to plan and execute your animation in a studio production environment. You'll learn to create shots that cut together correctly, staging your acting in the best way to support the overall story or character arc.

Prerequisites: AN04 or Advanced Placement

AN06 Polishing and Portfolio

In this course, you'll produce at least 15 seconds of polished animation for your demo reel. Learn the best practices for what to include and what not to include on your demo reel, and get valuable insights into the hiring process at top animation studios.

Prerequisites: AN05





Creature Animation Courses

12 Week Courses

WCL01
Creature Animation: Locomotion

Learn the essence of animal and creature locomotion—how a creature runs, walks, senses, stops, and turns. Challenge yourself to animate believable creatures with the help of top creature animators who've worked on ***Guardians of the Galaxy, Game of Thrones***, ***Star Wars***, and more!



WCF01
Creature Animation: Fight or Flight

Learn how to train your own dragon and animate fight scenes like the pros! This advanced workshop takes your skills to the next level by teaching you how to integrate believable creature animation with live-action background plates. Learn what makes a good action sequence, with tips on planning and pacing physical animation — and learn how to work effectively with live-action footage.

Workshops
6 Week Courses



WMAYA01
Maya Workshop: Animation Basics

This is where it all starts! This workshop is designed especially for beginners. Get comfortable with the Autodesk® Maya® user interface and the basic software tools for animators and set yourself up for success in our Character Animation Courses!

WTOON01
Cartoony Animation for 3D Animators

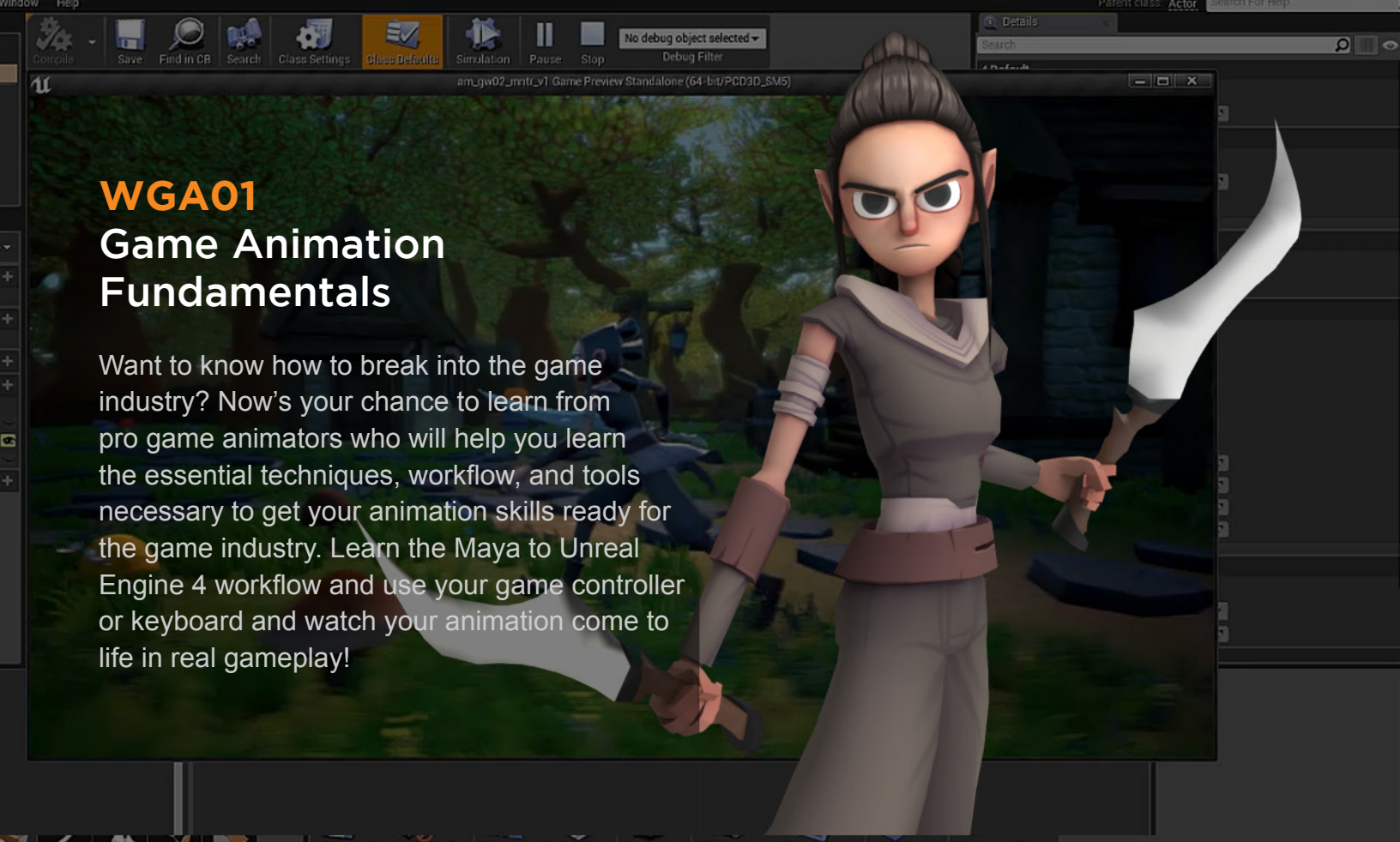
Push your 3D skills by drawing simple 2D animation sketches and learning to exaggerate your animation! You'll start with hand-drawn master studies of great animation to start learning effective cartoony techniques. You'll end up creating a simple cartoony animation following the traditional workflow and then re-creating that animation and workflow on a 3D character.





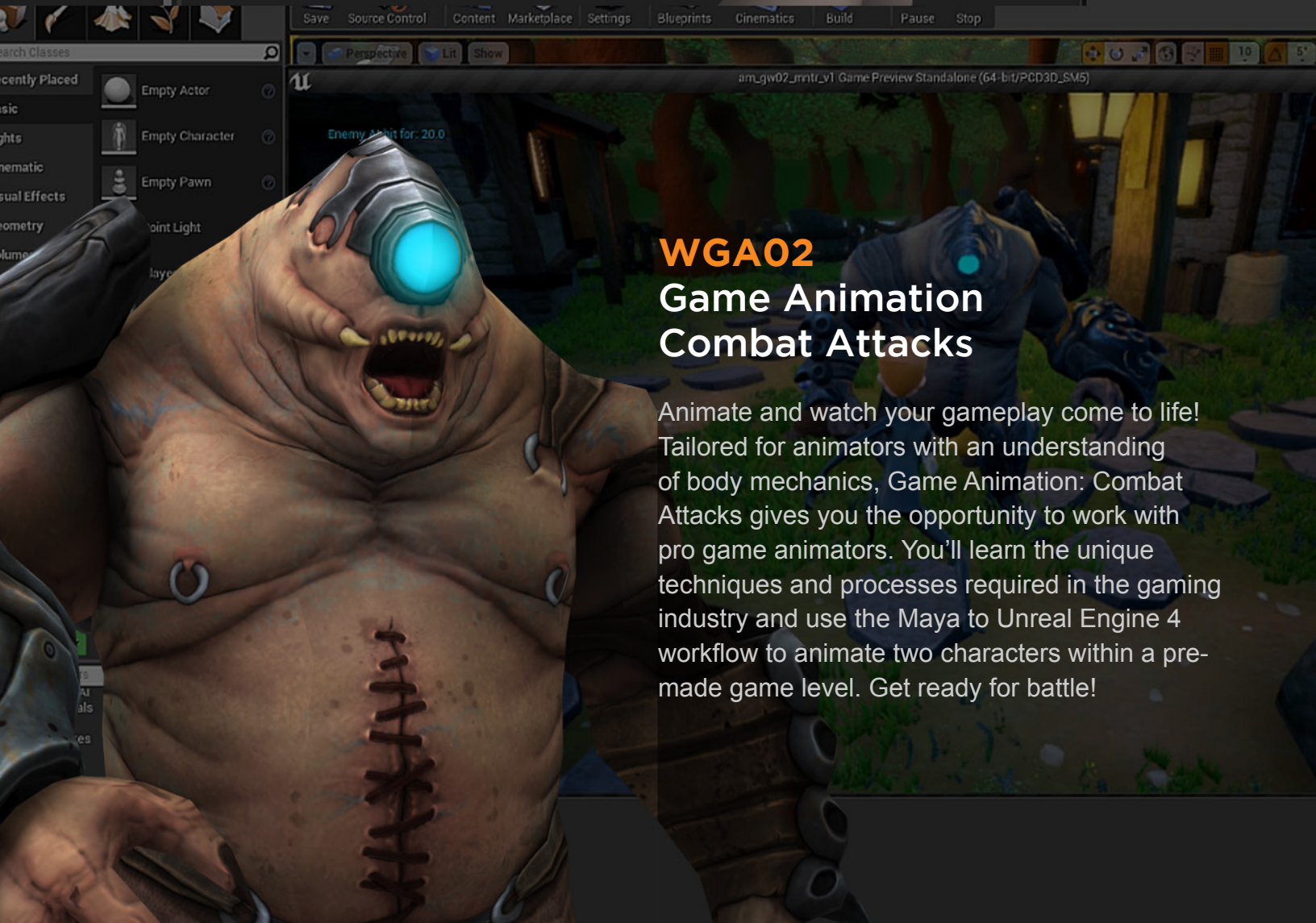
WSBOARD01
Storyboarding Fundamentals

Round out your animation skills by learning the foundation for staging, clarity, and emotion for visual storytelling! Learn why "Story is King" in Storyboarding Fundamentals with Mike Kunkel, who has pitched stories for Walt Disney Studios and Nickelodeon. Create your own simple short story and board it to completion.



WGA01
Game Animation Fundamentals

Want to know how to break into the game industry? Now's your chance to learn from pro game animators who will help you learn the essential techniques, workflow, and tools necessary to get your animation skills ready for the game industry. Learn the Maya to Unreal Engine 4 workflow and use your game controller or keyboard and watch your animation come to life in real gameplay!



WGA02
Game Animation Combat Attacks

Animate and watch your gameplay come to life! Tailored for animators with an understanding of body mechanics, Game Animation: Combat Attacks gives you the opportunity to work with pro game animators. You'll learn the unique techniques and processes required in the gaming industry and use the Maya to Unreal Engine 4 workflow to animate two characters within a pre-made game level. Get ready for battle!

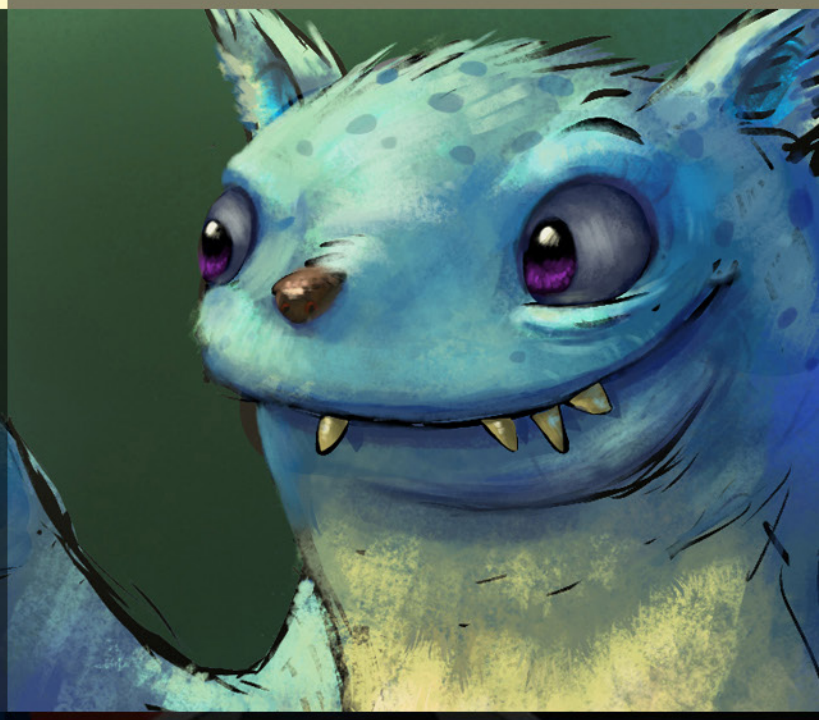


WVISDEV01
Visual Development: Principles of Design

Vis Dev Artists—also called Concept Artists—determine the tone and mood for all the characters and environments in a film, TV show, or game. Visual Development Artists have a huge impact across the entire entertainment industry, from animation, to live-action films, to video games, and beyond! In this workshop you'll get started with the basics.

WDPAINT01
Introduction to Digital Painting

The character, creature, environment, and background designs that determine the look and feel of your favorite movies, TV shows, and games all started with a painting! Learn the basics of what makes a successful painting and how to apply these skills to your own career path. Storytelling is essential in any visual medium, and you'll learn to use your digital paint brush to share your own characters and stories.





WPREVIS01
Previsualizaton Basics for Animators

Previs Artist starts with rough building blocks—just the storyboards or script—which they interpret into a 3D space. In this workshop, you'll learn how animation and camera work are used to help take a project all the way from script to screen! You'll also end up with 15–30 seconds of animation for your demo reel.



Your Destiny.

Character Animation Courses

Start your epic animation journey with Character Animation Courses and learn from the pros at Pixar, DreamWorks Animation, and Industrial Light & Magic.

Apply Now!

Workshops and Creatures

Focus or round out your animation knowledge and learn new skills in less time with our 6 week workshops.

Learn More