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Press Release

# Tech entrepreneur Brent Zorich unveils exciting apparel company shaped by experience at Lucasfilm

Published: Aug. 31, 2021 at 9:12 a.m. ET

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Aug 31, 2021 (AB Digital via COMTEX) -- "Sketches of Brent Zorich" is an apparel company created to share the designs and artwork of tech entrepreneur, Brent J. Zorich, who has worked at the largest architecture, animation, visual effects, and video game companies worldwide. Brent is a globally published tech entrepreneur and venture capital presenter, who has lived in both North America and Asia, and named as 'One of the Top 100 Global People in Tech and Innovation' by the Intercon Conference sponsored by Facebook and Amazon.

Zorich licensed auto rigging software that he authored that completes 80 hours of rigging work in 15 minutes to 250 universities on six continents. His LLC, BZP Pro, was under acquisition review five times with three separate Fortune 500 companies whose deals were brokered by a Goldman Sachs alum of Harvard. After he raised investment money from a banking alum of Harvard and Yale, he had booths at Siggraph and GDC where he got endorsed for his technology by The Siggraph Chair publicly as 'mind-blowing', and that work was featured on the cover of Worldwide Magazine, 3D Artist Magazine.

## THE WALL STREET JOURNAL.

Brent specializes in designing modular rigging engineering systems to automate characters like Buckbeak in 'Harry Potter and the Prisoner of Azkaban'. Zorich did something similar to that previously at Lucasfilm/ LucasArts/ Industrial Light & Magic, where he also frequented The Skywalker Ranch, was The Best Practices Review Committee selected by the former CTO of Peter Jackson's Weta Digital (The Lord of the Rings), an executive trainee, worked on the intellectual property of Star Wars: in particular the rigs of Boba Fett, Jabba the Hutt, Ultimate Evil (The cover character of Star Wars The Force Unleashed), and converging ILM's Jango Fett with Lucasfilm Animation Singapore's Ahsoka Tano on the Xbox, which was shown directly to George Lucas in the late 2000s. Other Lucasfilm IP included Steven Spielberg (Indiana Jones and The Staff of Kings), Michael Bay (Transformers Revenge Of The Fallen), and JK Rowling (Harry Potter and The Half-Blood Prince).

EA Sports (where he redesigned the rigging system on their top title, Madden NFL, and NCAA Football, as well as attending global rigging research and development on Fifa, Facebreaker, NHL, EA Harry Potter, and Tiger Woods PGA) and Take Two Interactive (NBA 2K with rigging tests done on Shaquille O'Neal motions) were also previous employers. At ACCAD (where CGI was invented in the 1960s) at The Ohio State University, for his master's degree, he was in The DreamWorks Outreach Program focusing studies in technical animation while being trained from supervisors on such films as Shrek, Madagascar, Finding Nemo, Shark Tale, and Spider-Man 2, with attending a lecture session by the "K" in DreamWorks SKG: Jeffrey Katzenberg. This training at ACCAD was applied to a one hour long Jurassic Park oriented dinosaur special that aired on The Discovery Channel where he worked in coordination with paleontologists from The Burpee Museum in Rockford, Illinois, who worked with Spielberg's dinosaur crew on Jurassic Park.

Zorich's master's thesis focused on auto rigging dinosaurs in the programming language Python. Brent also does concept illustration work (QA on Adobe Photoshop for Adobe's Apple iPad team via illustrations), and was formerly an interior architect for the two largest architectural firms in the world: #1 Gensler and #2 NBBJ with clients such as Adidas, Volkswagen, and The Republic of China. Most recently Brent was subcontracted rigging prototyping work from Sony Pictures involving The Marvel Cinematic Universe and Walt Disney Feature Animation, while taking continuing studies at Stanford University in linear algebra and engineering. His undergrad degree from Ohio State was in industrial design where he focused on independent projects for Nike and Reebok. Brent looks forward to sharing his art and designs with the whole planet. Brent's eventual goal is to become a Chief Visual Officer at a major VFX, video game, or animation studio.

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**3D ARTIST ISSUE 10**

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# workspace<sup>3D</sup> Interview

Inside guide to industry news, studios, expert opinion & education

## Industry insider Brent Zorich

Character technical director,  
Lucasfilm

Each issue, **3D Artist** finds out how the top people in the 3D industry got their jobs and what you need to know to get a foot in the door

### About the insider

**Job** Character technical director/lead rigger

**Education** Master's of Fine Art at ACCAD at The Ohio State University

**Company website** www.lucasfilm.com

**Personal website** www.brentzorich.com

**Biography** Prior to immersing myself in the animation industry, I had worked for the top two architectural firms in the world. I pride myself on trying to be on a team that does the best work, no matter what project. I push technology as far as I can on whatever team I am affiliated with

**T**here are few people in the 3D industry who can claim to have worked on bestselling EA games titles one year and hung out at Skywalker Ranch with Lucasfilm the next, but **Brent Zorich is a man who can.** Zorich was part of a steering committee meeting for Lucasfilm on film/game convergence. In addition, he was lead rigger on *The Force Unleashed: Ultimate Sith Edition*. On this title, he was working in the LucasArts division, looking at pipeline and storage optimisation and lead rigging on such characters as Jabba the Hutt and Boba Fett. Zorich was also dealing with convergence on all divisions from Lucasfilm to LucasArts, Lucasfilm Animation, Industrial Light & Magic and Lucasfilm Animation Singapore.

**3D Artist:** What did this role of working on convergence mean in practice?

**Brent Zorich:** As a part of the senior staff, I wrote proposals to help set the direction for Lucasfilm Ltd as a company. In Singapore, not only was I part of research and development prior to my promotion and relocation to the home office in San Francisco, I

also worked on colour correction and compositing for *Star Wars: The Clone Wars*.

**3DA:** How did you get this job?

**BZ:** I applied online and was hired after Lucasfilm Animation Singapore saw the great work I did on EA Sports' football franchise.

**3DA:** What kind of course did you do at university, or training did you do?

**BZ:** At ACCAD at the Ohio State University, I did extensive research on the following topics: VRML; procedural animation; Pixar's RenderMan; motion capture. I also researched Wayfinding in real-time simulation (the subject analysed and improved upon was the game *Spider-Man The Movie*).

First of all, the Wayfinding tool was created out of VRML and theories worked on with an eminent scholar. I also studied the enhancement of realism in computer animation through the incorporation of biomechanics and fatigue (the subject analysed was *Shrek*). Next, I looked at rigging of prehistoric animals with my project-based thesis *Mystery Dinosaur* work. Finally, I looked at creatures evolving based on the ecosystem around them. Classes were also taken in digital still-life lighting and theatre lighting.

**3DA:** For today's generation of students, what is the kind of educational grounding they should be looking to undertake to get a first job as a character animator, or is the entry level a less specific role?

**BZ:** This is the way that I do it. I have a television next to my monitor. I watch *Harry Potter and the Prisoner of Azkaban* (the Buckbeak scene). If I am embarrassed to look at what is on my monitor then I'm not done, plain and simple. I am my own toughest critic and I have zero tolerance.

**3DA:** In your role as associate technical artist or lead rigger at EA Sports, what kind of work did that entail?



### portfolio highlights

Zorich has worked on a host of videogames over the years. Feast on these...

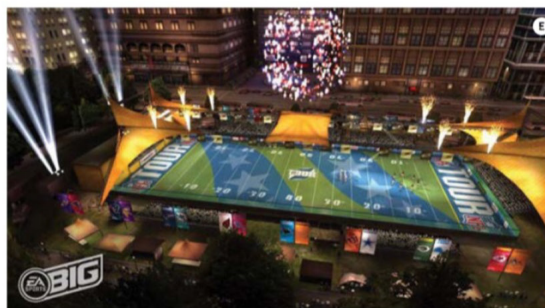
**2008-9** *Star Wars: The Force Unleashed, Ultimate Sith Edition*  
**2008-9** *Indiana Jones and the Staff of Kings*  
**2008** *Star Wars: The Clone Wars*  
**2008** *EA Sports MMA*  
**2007-8** *NFL Tour*  
**2007-8** *NFL Head Coach 09*  
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**2007-8** *Madden NFL 09*

**2007** *Tiger Woods PGA Tour 09*  
**2007** *Madden NFL 08*  
**2007** *NCAA Football 08*  
**2007** *College Hoops 2K8*  
**2007** *NBA 2K8*  
**2006** *College Hoops 2K7*  
**2005** *Superman Returns: The Videogame*  
**2003-5** *The Mystery Dinosaur for The Discovery Channel*



- A** Character rigging on *SW Force Unleashed*
- B** Brent at Lucasfilm Animation
- C** NCAA college football from EA





**BZ:** I needed a complete understanding of physiology of humans built for strength and speed. Because I was an athletic trainer who trained football players, it came to me naturally. I know how a football player flexes, I know how they run and sprint and I know how they get prepared for collision. Often, because I have a football player's body, I would go into the washroom at EA where there was a mirror, take off my shirt and flex both my traps and my arms to see the proper deformation. This is how I got into character and what made it so easy is that the character I was getting into was myself!

**3DA:** Is there much of a culture or professional working practice difference between working for someone like EA and a company like Lucasfilm?

**BZ:** You are who your team is. Lucasfilm, as a company, is a natural fit for me. We both have zero tolerance when it comes to the quality of our work. We push the absolute limitation of technology in every way, shape

and form. Because we are not on yearly titles, we have the ability to push back a launch date to guarantee that we are doing our best to break new ground.

**3DA:** What software packages and tools have you used for rigging and animation?

**BZ:** I use Maya, the proprietary software to Industrial Light & Magic, and After Effects and HyperCam for documentation.

**3DA:** Do you think there is a shortage of skilled digital artists doing animation and did you find it difficult getting into the industry?

**BZ:** My best advice to any student is try to do an internship in a studio. Do not rush to get out of school; stay in and develop your craft. Finally, do the Buckbeak test as I mentioned above.

**3DA:** What are the key skills required to work as a character animator or character rigger?

**BZ:** Observation, patience and the goal to push technology. Everything you do, imagine you have to present it to George Lucas. Then you will work harder and will expect the absolute best from yourself and your team.

**3DA:** If there was one feature missing from current software apps that you would like to see implemented to help with any aspect of CG animation, what would it be?

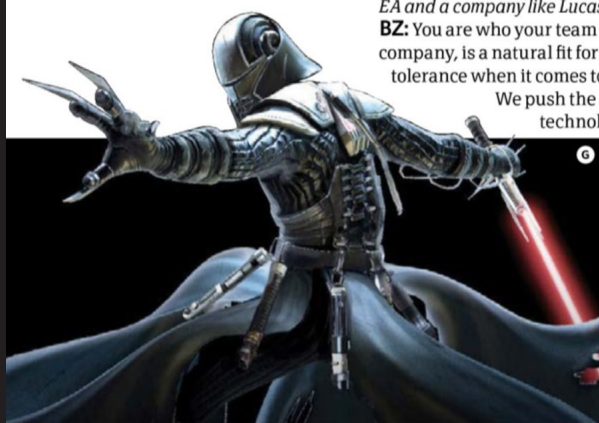
**BZ:** I saw a demo from a company where you can actually draw arcs of motion on a Wacom tablet and the object will have an animation path.

**3DA:** Professionally, what's the most satisfying project you've worked on and why?

**BZ:** Seeing my name at the end credits of *Star Wars: The Force Unleashed*, *Ultimate Sith Edition* makes me incredibly proud. I saw the first *Star Wars* film when I was three in 1977. It motivated my whole career. To see my name in a *Star Wars* product gave me a sense of satisfaction.

**3DA:** What would be your dream project to work on?

**BZ:** One that continues to push film/game convergence on every level. The ultimate goal for me would be to have an engine that supports a controlled character and the user cannot distinguish between real-time and render.



**D** Tiger Woods PGA Tour 09

**E** Character work on NFL Tour

**F** Indiana Jones and the Staff of Kings

**G** Artwork from SW: TFU Ultimate Sith edition

**H** College Hoops 2K7

**I** The Ultimate Edition in full



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ISSUE 076





24 tricks for better lighting Page 36

# Welcome

to the magazine and 100 pages of amazing 3D



**Welcome to 3D Artist magazine!** Character design is the beating heart of many a 3D artist's workflow. In this issue, we speak to some amazing, imaginative character artists and dive headfirst into their 3ds Max creations starting on p26. Elsewhere in the magazine, learn how to craft real-time hair in ZBrush (p56), discover professional techniques to improve your lighting (p36) and find out what we thought of NUKE Studio (p80). Enjoy the issue!

*Dan Hutchinson* Editor in Chief

**Every issue you can count on...**

- 1 Exclusively commissioned art
- 2 Behind-the-scenes guides to images and fantastic artwork
- 3 Digital downloads full of handy assets
- 4 Interviews with inspirational artists
- 5 Tips for studying 3D or getting work in the industry
- 6 The chance to see your art in the mag!

## This issue's team of expert artists...

### Tom Parker



Tom has provided us with his talents this month to walk you through creating real-time hair for videogames in ZBrush. Check out his step-by-step tutorial on p56.

### Orestis Bastounis



Our technology wizard Orestis has taken a magnifying glass to two different workstations this month. Head over to p84 to discover his expert verdicts.

### Geoff Kirk-Smith



The Assembly's senior character animator has turned his attentions to V-Ray 3.0 for Maya this month, putting the lighting, shading and rendering tool through its paces.

### Nikita Kuzmichev



Take a look at p46 for Nikita's super in-depth ZBrush and Photoshop sci-fi tutorial, as he takes you from blocking out meshes to the final render in 16 steps.

### Paul Champion



Compositing pro Paul Champion has been on a review rampage this month, providing his expert opinions on both NUKE Studio and Substance Painter 1.0, starting on p80.

### Digital-Tutors



The CG experts over at Digital-Tutors have worked their educational magic again. This month, learn how to model a weapon and animate fight moves in 3ds Max.

### Vikrant Dalal



VFX expert Vikrant is here to teach you how to simulate an accurate tornado effect using 3ds Max and the FumeFX plugin. His tutorial begins over on p72.

### Brent J Zorich



Brent is a clever chap, having written his own Smart Skinner for Maya. On p76 he reveals how using the Smart Skinner for auto-rigging can save you hours of time.

### Chris McMahon



Former 3D Artist editor Chris speaks to Chris Doran, director at Geomerics, over on p92 about real-time lighting in videogames and the benefits of using Enlighten.

# 3DArtist

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Richmond House, 33 Richmond Hill  
Bournemouth, Dorset BH2 6EZ  
☎ +44 (0) 1202 586200  
Web: [www.imagine-publishing.co.uk](http://www.imagine-publishing.co.uk)  
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13-issue subscription (Europe) – £70

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Printed by William Gibbons & Sons Ltd, 26 Planetary Road, Wiltshire, West Midlands, WV13 3XT

Distributed in the UK, Eire & the Rest of the World by Marketforce, Blue Fin Building, 110 Southwark Street, London SE1 0SU  
☎ 0203 148 3300, [www.marketforce.co.uk](http://www.marketforce.co.uk)

Distributed in Australia by Network Services (a division of Bauer Media Group), Level 21 Civic Tower, 66-68 Goulburn Street, Sydney, New South Wales 2000, Australia ☎ +61 2 8667 5288

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## Auto rigging with Smart Skinner

“How can I rig and skin a character more efficiently to save billable hours - typically days or weeks?”

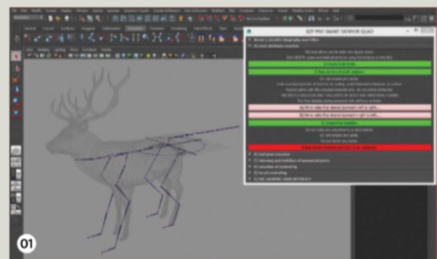


**This tutorial is a breakdown of how the Smart Skinner is used in the production environment to save days, if not weeks, on the rigging and skinning process of a character.**

This step-by-step process goes over the basics of the software and will rig and skin a character of a deer in a matter of minutes. When I worked in production for the biggest companies on the planet, it would not be uncommon that from a billable standpoint, a development director might give me two weeks to start, execute, and complete a rigged character. This caused headaches in the production setting as often I was repeating the same task on different proportions without an effective way of cutting down hours. At Lucasfilm, I was looking through the assets of the main characters such as

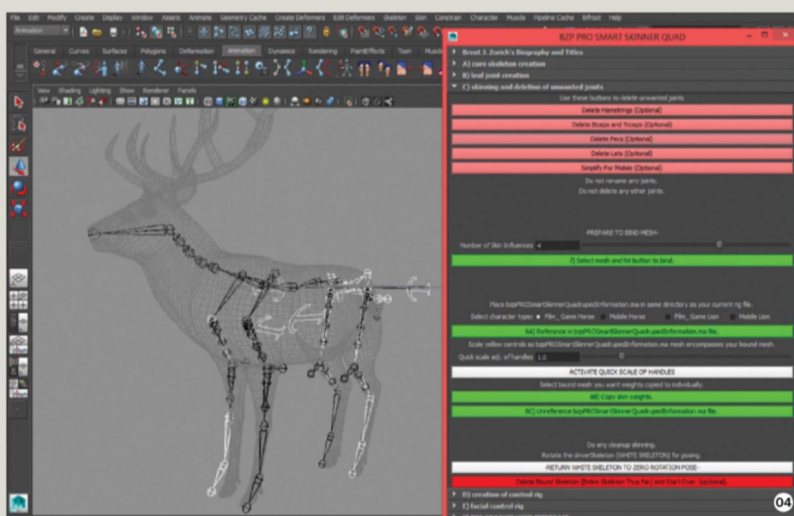
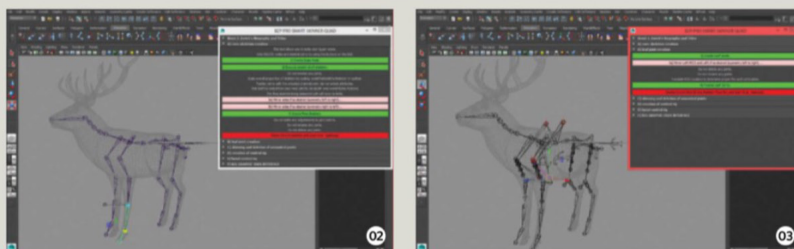
Ahsoka, Jango Fett and General Grievous extracting their key attributes and incorporating them into a super rig that could be benchmarked for the company. At EA Sports in the late 2000s I designed the rigging system used for Central Football for titles such as *Madden NFL* and *NCAA*. This Smart Skinner software I have written is a culmination of techniques from these top companies incorporated into a tool that is affordable and easy to use. The character will be completed through a process of firstly executing a sketch skeleton to obtain proper proportion. Then, the character will be blocked out within the mesh to ensure the joint positions are in the correct spot. The Smart Skinner will create the leaf helper twist joints to assist with the proper deformation required to make the rig

production quality. Then, the animator specifies whether or not he wants the character to be a 'film next-gen character' or a 'mobile character'. From there he will reference in a pipeline that enables auto skinning, transferring the skinning weights, unreference the pipeline skinning file, and making an entire control rig at the push of a button. The end result will deliver a character able to be animated out of the box that is top-of-the-line production quality ready for either film or game.



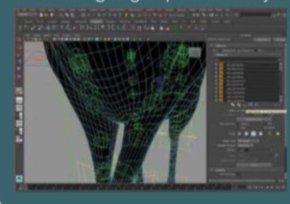


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## Skinning cleanup on the character

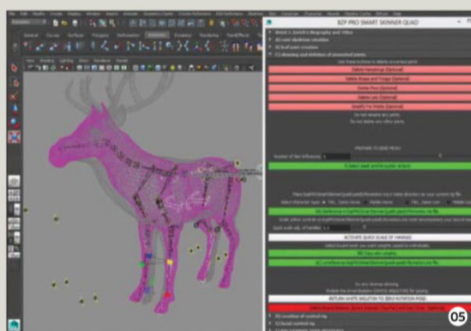
In certain intersections of the character, there will be a need to do skinning cleanup on the joints. The skinner can't predict every deformation. This can be achieved by using the Hammer tool in the skin weighting drop-down in Maya.



rotation down the limbs for proper deformation. The animator can use the white anchor controls to assist in the orientation of the joints. Translate the red crosshairs to the proper position, if desired, to orient the pecs and lats on your character.

## 04 Delete unwanted joints or simplify for mobile gaming

Use the pink buttons to delete unwanted joints. It might be possible that you do not require pecs, lats, hamstrings, or biceps – use these buttons only to delete the joints and simplify down to 'mobile' if necessary.



## 01 Execute Scale Node and sketch skeleton

Push the button to activate the Scale Node. This will set the overall scale of the rig. Then hit button 2 to generate the sketch skeleton that is already in a base proportion. The animator needs to translate the root of their mesh to the 0 0 0 world space coordinate. The root of the sketch skeleton is locked.

## 02 Block out proportions of the skeleton

By using the open channels, and open channels only, begin to sketch out the proper proportion of the skeleton to the character. Locked are not to be unlocked, this will maintain the proper joint orientation and guarantee that your IK will be set up properly in Step 6. You can also mirror your skeleton for symmetry. Once you have the proportion you want, hit button 4 to lock the sketch skeleton into place. That will zero out your joints in your sketch skeleton.

## 03 Create leaf joints for deformation and counter rotation

Hit button 5 to execute the 'leaf helper' joints. These joints will assist in the counter

## 05 Reference in skinning pipeline and transfer weights

Select whether or not you have a 'mobile character' or a 'film next-gen character' (note for the quad you will pick whether your character is built like a cat or a horse) and hit button 8A to reference in the pipeline file. Scale the yellow controls so the reference mesh encompasses the character mesh. Hit 8B to transfer the skin weights. Your skinning should be near completed. Hit 8C to unreference the reference file. You now have a clean scene with weighting that is 90 to 95 per cent complete. Do any cleanup skinning at this point.

## 06 Create control rig and facial GUI

Now that you have a skinned file, hit button 9 to generate the entire control rig. Your rig is complete. The rigging process is a three-joint chain rig: a control rig driving an animation skeleton that drives a deformation skeleton. In regards to complexity, the control rig is at the level of a major motion picture studio. Hit button 10 to generate your facial GUI that can be used with blendShapes in Maya. Once you've done this, you're ready to animate!

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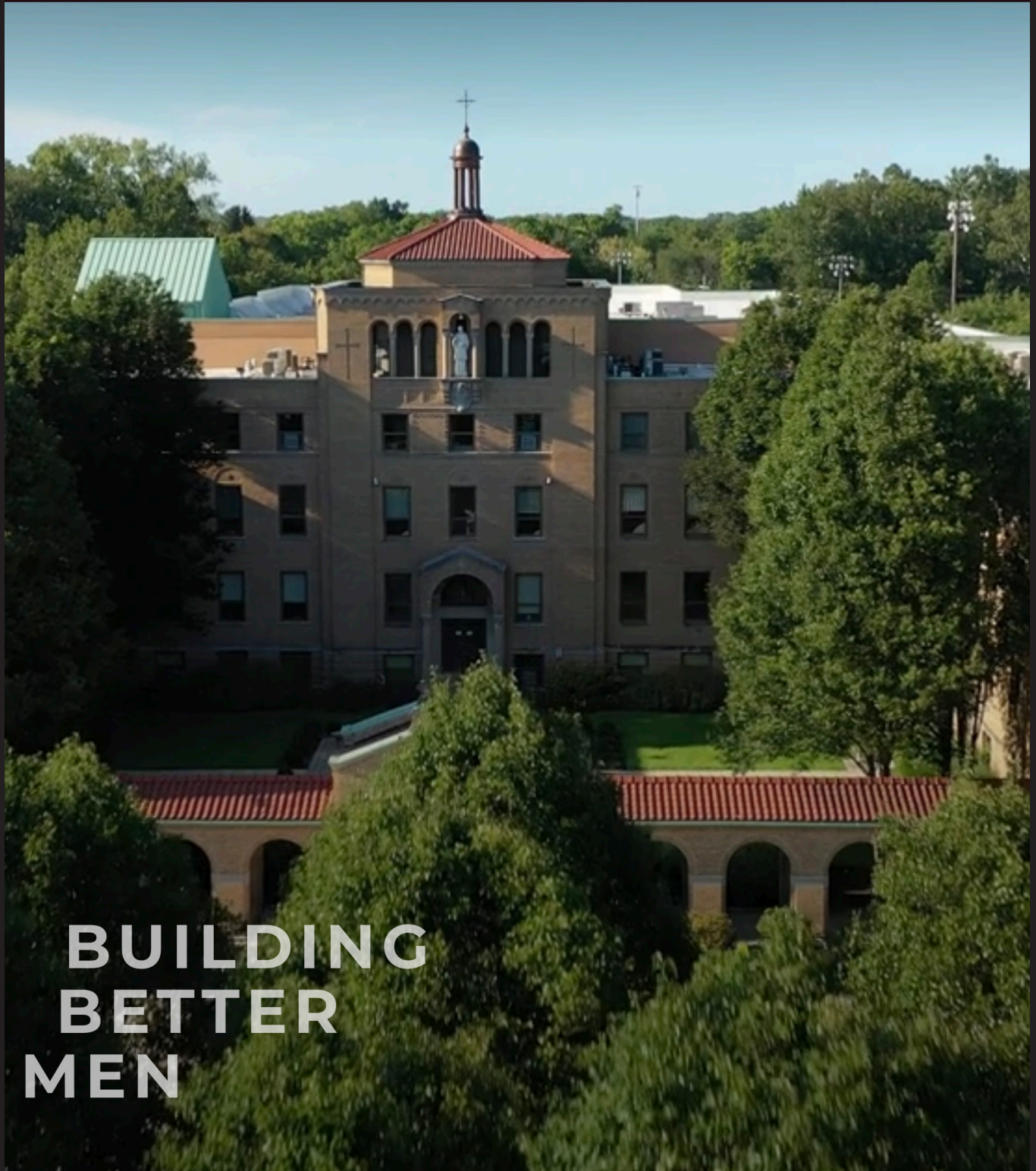
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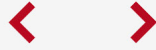
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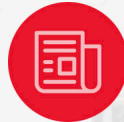
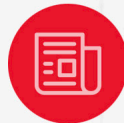
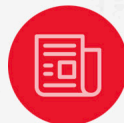


BUILDING  
BETTER  
MEN

LOGIN MENU  ST. CHARLES AT A GLANCE

# 100 Years of Tradition

Since its founding in 1923, St. Charles Preparatory School has nurtured the minds and hearts of scholars, priests, entrepreneurs, executives, artists, musicians, doctors, legal professionals, and community leaders.

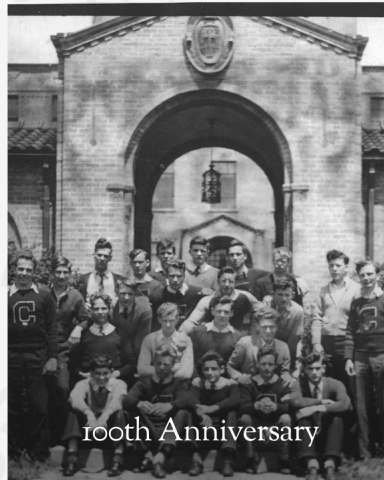
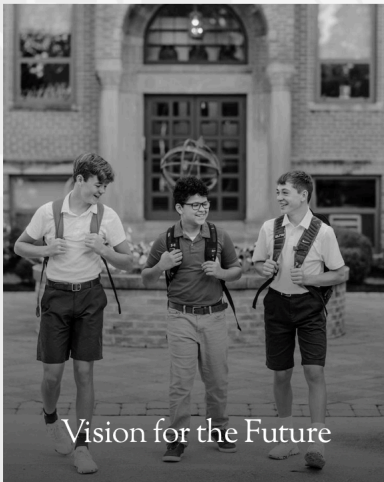
**LEARN MORE** **1923****Year Established****9-12****Grades Taught****579****Students Attending****80%****Faculty Hold Advanced Degrees****80%****Student Body is Catholic****68%****Students Receiving Financial Aid**

LOGIN MENU 

WE ARE ST. CHARLES

# Building Better Men Since 1923

Saint Charles is an all-boys college preparatory Catholic high school of the Diocese of Columbus, Ohio, that instills in its graduates the importance of prayer, faith, service, character and hard work in an environment that values diversity, accountability and excellence and that creates an enduring tradition of brotherhood.



“

***“We have been so blessed that all five of our sons have been here! I think that St Charles chose us, as when the boys were very young, we were asked if they were going to go to St. Charles? They have not only been given an outstanding education, but given an enormous opportunity to learn and live out what it really means to be their “brother’s keeper” in the world.”***

”

- THE RIVERA FAMILY



LOGIN MENU 

STORIES &amp; UPCOMING EVENTS

# What's Happening at St. Charles



- Alumni Spotlight - Brent J. Zorich
- Championship-level friendship
- Winter Alumni January's Networking Happy Hour: "Building Your Personal Brand"
- Annual St. Charles Spaghetti Dinner - Sunday, February 4th
- Sean Moore '24 named one of 12 Columbus-area high school hockey players to watch this season.

VIEW MORE NEWS 

JAN 15

**NO SCHOOL:**  
Martin Luther King,  
Jr. Day

JAN 19

**Late Arrival:**  
Faculty Meeting

JAN 19

**Senior Retreat**

JAN 24

**Freshman Mass**

10:40 AM

*Location: Chapel*

JAN 24

**Freshmen Mass**

10:40 AM

JAN 24

**Charism Essay**

6:00 PM - 7:00 PM

VIEW ALL EVENTS 



LOGIN MENU 

JAN 24 **Freshman Mass**  
10:40 AM  
*Location: Chapel*

JAN 24 **Freshmen Mass**  
10:40 AM

JAN 24 **Charism Essay**  
6:00 PM -7:00 PM

[VIEW ALL EVENTS](#) 

# DISCOVER MORE AT ST. CHARLES



2010 E BROAD ST. | BEXLEY, OH 43209 | PHONE: (380) 209-2222 |     

*St. Charles Preparatory School admits students of any race, color, national and ethnic origin to all the rights, privileges, programs, and activities made available to students at the school. It does not discriminate on the basis of race, color, national and ethnic origin in administration of its educational policies, admissions policies, scholarship and loan programs, and athletic and other school-administered programs.*



# Alumni Spotlight - Brent J. Zorich

1/10/2024

After graduating St. Charles in 1993, Brent studied industrial design at The Ohio State University, graduating as the design undergraduate class president, and did independent thesis work for Nike and Reebok. Once completed, he worked as an architectural designer for the two largest architecture firms in the world: Gensler and NBBJ. Due to his love of computers, he went back to graduate school and completed a master's in computer visualization at the Ohio State ACCAD program where computer graphics were invented in the 1960s. His thesis in school focused on automation of character technical direction in the programming language PYTHON. While in school, that was applied to a sponsored "Walking with Dinosaurs" type project that aired on the



Discovery Channel in prime time. In the creation of that special, his team worked with Steven Spielberg's paleontology team from *Jurassic Park*.

During his tenure at ACCAD as a student he was also in a twenty week DreamWorks Outreach Program being trained by computer graphics supervisors whose portfolios ranged from *Spider-Man 2*, to *Shark Tale*, to *Shrek*, to *Finding Nemo*, and *Madagascar*. Although working in film could have been an option, he chose to focus on video gaming. After graduation he went to Take Two Interactive and concentrated my efforts on award winning *NBA 2K Franchise* (working with the mocap data of Shaquille O'Neal). Then he moved on to EA SPORTS where he accomplished several big feats including *Superman Returns* as well as redesigning the rigging system on Electronic Arts top title, *Madden NFL 09*. He also helped with a few other titles at EA including *NCAA Football* and *Tiger Woods PGA Tour 09*. Around that time, in 2008, is when Lucasfilm called about coming on board. He couldn't turn down the opportunity. He left the United States and moved to Singapore where he was in film game convergence and plowing through all of the characters like Ahsoka Tano, Jango Fett, General Grievous, Anakin Skywalker, etc, optimizing techniques and figuring out ways to rebuild them more efficiently so the same digital character asset could work on both Xbox and in film thereby cutting costs, not needing two separate divisions to build two separate characters.

After the work he did, it was shown directly to George Lucas himself, and then was relocated to

San Francisco where I applied technical efforts to intellectual property including *Indiana Jones*, *Star Wars The Clone Wars*, *Star Wars The Force Unleashed*, and monthlies editing for *Harry Potter and the Half Blood Prince*. Brent was also an executive trainee and the Best Practices Review Committee of Lucasfilm (1 of 10 members). After doing that for a year or two, unfortunately both of his parent's health faded causing him to leave San Francisco to come home to be a caregiver. They are both in heaven now. Once back in Columbus, he formed a computer animation plugin company called BZP PRO with a few alums from Harvard that featured an auto rigger plugin that he authored that automates 80 hours of computer graphics rigging into about 15 minutes at the level of Industrial Light & Magic/ Lucasfilm, a previous employer. This technology has been featured in three worldwide magazines, cover included, and has been under acquisition review several times with three Fortune 500s carrying a price tag of about 20 million dollars. He is still, currently, working on the formula and to assist and has started taking remote class at Stanford University in linear algebra. While he was primarily working on this technology, he was doing freelance work for both Walt Disney Animation (T.O.T.S. and VAMPIRINA), as well as Sony Pictures on Marvel Intellectual Property (Drax the Destroyer in *Guardians of the Galaxy Vol 2*). Lastly, due to him also assisting Adobe with QA on Adobe Photoshop, he took the test drawings he had completed and placed them on his own apparel line called "Sketches of Brent Zorich." Both the apparel and the technology he is treating as cash cows that sell products via e-commerce with little to no maintenance. On the



apparel line, he was featured in The Wall Street Journal Market Watch and was even contacted by Michael Jackson's Public Relations about representing him after they saw how he had set everything up. He believes the goal would be, after one of these two ventures could be sold, would be to set up his own private equity investing in video game technology. Brent would do that in addition to still working in games. In 2021, Brent won an award at The Intercon Conference sponsored by Facebook and Amazon in Las Vegas where he was named one of the top 100 tech influencers worldwide. Really exciting! For those interested in seeing more, you can check out his portfolio at this following address:

[brentzorich.com/brentZorichPortfolio.pdf](https://brentzorich.com/brentZorichPortfolio.pdf)

"St. Charles is an amazing school that provided me the discipline to stay focused, and stay strong, even when trying to run two companies while caregiving for two terminally ill parents. I'm hoping these cash cows get sold off. Thank you again for this opportunity to share my story."

**BACK** 

