Justin Cummings:	Welcome to A Smarter U, a University of Lynchburg podcast. I'm Justin Cummings and today I'm joined by Brian Gentry, editor of the University of Lynchburg magazine.
Bryan Gentry:	Hello.
Justin Cummings:	And Francesca Vasquez, Lynchburg College, class of 2000.
Francessca Vasquez:	Hi Justin. Hi Brian.
Justin Cummings:	So today we are here to talk about Francesca, about her wonderful accomplishments since graduating here and also about STEM education, cloud computing and all sorts of fantastic technology things and how it relates to higher education and leadership. Really cool topic, a really great person to be here. Francesca, tell us a bit about yourself. What do you do now? What did you do here at the university?
Francessca Vasquez:	Sure. And it's so great to be here. Great to be on campus. So as Justin mentioned, my name is Francesca Vasquez. I'm the director of architecture and customer success with Amazon Web Services and we're really responsible for helping startups and enterprises adopt cloud computing in order to help them innovate. And I am just thrilled because I think that technology has really changed over the course of the last 20 years. I'm excited to be part of it and I'm even more excited that the University of Lynchburg is leading in some of the programs that we offer here. So very happy to be here.
Bryan Gentry:	Based on that, I infer that you had a computer science degree here.
Francessca Vasquez:	I did. So I'm class of 2000. I graduated with a computer science degree, studied under some amazing professors, many late nights and I'm leveraging that every day.
Bryan Gentry:	So graduating in the year 2000 you were finishing high school and then going to college at a time when there was a lot of development in technology, especially with the Internet and the worldwide web. Uh, what was that like and how did your interest in computer science come about?
Francessca Vasquez:	Sure. Let me start with the last question first. So my interest in computer science and really just technology in general was multifaceted. By nature, I'm a builder, and I'm a very curious learner who happened to be pretty decent in math. And I remember in high school my mom encouraging me to take an intro to programming course, which at that time happened to be Fortran. Anybody out there that's worked in Fortran, you're one of my heroes or sheroes. But I started there. And then the other thing that I used to be really excited about is I was a bit of a closet gamer. I was masterfully working through games like the legend of Zelda and I just was fascinated by technology and software at that time of all sorts. So I took an intro to programming course and I did not look

back. Now, coming to Lynchburg at the time we were called Lynchburg College. And what originally brought me here is I attended a college fair in my senior year of high school. I actually had already been accepted to two other schools out of state living in Virginia and I found Lynchburg College at the time at a booth and filled out the information, what I was interested in and within, you know, 48 hours, someone from the University contacted me. And so a very high level of engagement. I heard from Dr. Conny Roussos at the time, who was one of the leading faculty for the computer science department. And also during that time, there was a lot of press around some of the research and development that Dr. Thomas Nicely was doing as it related to identifying errors in Intel's Pentium processor.

Bryan Gentry: So I, that rings a bell for me because I remember when I was in high school, one of my cousins telling me that I should be a Mac person, not a PC person. And his reason was because of the math errors in the Pentium chip. And I was trying to come up with reasons why that didn't matter or why it didn't matter to me or something. And I never in my life imagined that I would someday be at the place where those errors were discovered. Were you familiar with those already when you came into contact with Lynchburg College? Were you familiar with that research?

Francessca Vasquez: I was familiar with it after I had the initial initial introduction to the college at the fair and it was a pretty big deal. You've got to remember it. Your second part of the question was what was the state of the industry at that time? Web Development. And the Internet was growing at a pretty exponential rate. Lots of e-commerce, home computing, personal computers were becoming a staple in many households, not all, but in many households. And so it was a pretty big deal. And the fact that that was one of our faculty members here at the college who by the way made his research so accessible to students, I really wanted to learn from that team and I was very exciting during that time and, very thankful for being able to work with the school of Sciences with those professors. And then the other great professor that was on that staff was Dr. Barry Lob. So that was the Dream Team as I called them during that time.

Bryan Gentry: So your interest was partially sparked by Zelda. You said you were a closet gamer, and Justin is a not closet gamer.

Justin Cummings: Not in the slightest, no. I've written several papers for classes about various video games and it pops up a lot in my academic work. I have to ask, did you ever get a chance to play the second Zelda on the NES?

Francessca Vasquez: I did not. So I'm going to disappoint you. I did not-

Justin Cummings: You dodged a bullet on that one. It's not the best game. They completely changed the style and never went back. I was going to say, if you managed to beat that one, you're my hero cause nobody knows how to play that game. It's insane.

Francessca Vasquez:	Well, there's still opportunity so we'll hang tight. Justin. There's still opportunity. But I think it just goes to show that during that time there were so many different facets of what you could do in technology. Gaming and interest in mathematics were just two of my personal interests that I happened to turn into an amazing passion. But there are others and we will play Zelda one day, Justin.
Justin Cummings:	Oh yes, absolutely. Absolutely. Now that there are co-op games, I have my GameBoy ready to go. Four Swords. Let's do it.
Bryan Gentry:	Do you have it with you? Do you all want to play right now?
Justin Cummings:	I don't have my link cable unfortunately. I do have the Game Boy itself, though. Put me on the spot.
Bryan Gentry:	Next episode.
Francessca Vasquez:	Next episode!
Justin Cummings:	Next episodes is going to be on Twitch. The live stream, "let's play". I would approve, I would approve so much if the school let me do that, but I don't think they will.
Bryan Gentry:	We'll think about it. Francesca, you mentioned you use the term "closet Gamer".
Francessca Vasquez:	Yeah.
Bryan Gentry:	So you didn't want to admit that you were gaming? Tell us more about that.
Francessca Vasquez:	I totally didn't want to admit that I was gaming during that time. You know, I, I did not necessarily fit the mold of what people thought of computer programmers and gaming in a variety of fashion. So I sort of kept to myself and I played and enjoyed it. And again, it wasn't until I got to the Lynchburg College at the time that I found many others like me that just share the interest in computing and not just computing, but web development was pretty rapid during that time. And many of us got an opportunity to build our own sites. E- commerce was booming during that time. I remember some of the early days of helping to contribute to the University of Lynchburg original website. Sorry for that. But it was a lot of fun time.
Bryan Gentry:	I've seen screenshots.
Francessca Vasquez:	Yes.
Bryan Gentry:	You know, for the time that was what websites looked like. So where did that mold come from? Where do you say that you didn't fit the mold that people

expected for computer programmers or gamers? Where did that mold come from? How was it communicated that there was a certain expectation for people with that interest?

Francessca Vasquez: Well, I think it ties into one of my passions today. I call myself a builder. So how do I attract other builders who potentially come from underserved communities or underrepresented segments. And I think just during that time, you didn't hear a lot about many female programmers. You didn't hear a lot about women of color in the field of computing. And so you just didn't see it. And so now it's my mission to just get like-minded builders of all backgrounds, uh, to drive to the same end game and be excited about it. There's so much technology now that is built for everyone and that is the exciting part. You can be interested in gaming, you could be interested in pure software development. You could be someone that's very in tune with data and statistics and really focus in on new growth areas like machine learning and artificial intelligence. It is unlimited right now.

- Justin Cummings: I personally think it's fascinating that there were more women in computer programming back in the eighties and seventies than we realized, but they were often not getting the credit they deserved. And we're just now starting to hear about some of them. I think we're seeing more and more things trying to say that women can be in this field. Um, there was a show, "Halt and Catch Fire" a couple of years ago, which the whole point of that show was women can not only be in technology, they can be the best at technology. What do you think it would be like coming up now where we have all these representations compared to when you were coming up in the field?
- Francessca Vasquez: Well, I think now it's more accessible. I think now you can have multi-disciplines. So my path happened to be computer science, but I have a ton of colleagues in the industry now that have come up through communications that have come up through business that have been in statistics and engineering. I just think that the innovations have made technology far more accessible and anyone really can participate. We just have to choose to go and help and support this. Folks that choose to.
- Bryan Gentry: You mentioned helping people come into the field, helping people realize the potential they have in the field. Earlier you mentioned that one-on-one engagement. The fact that someone reached from the college reached out to you so soon after you filled out that form. And then you came for a visit. You told me before we started recording the episode that you came for a visit and you got to sit down and talk with the faculty members just while you were visiting as a prospective student. How did that kind of access continue while you're here, and how did it impact your life and your, uh, and your career?
- Francessca Vasquez: Yeah, it's a great question. The university is so unique and I think like many students when you're evaluating going off to college or to a university, it can be very overwhelming for many people. It's the first time that they've been away from home and I was no different. I believe when I stepped foot on this campus,

the sense of community was instant. It was felt. I felt engaged, I felt listened to, I felt supported. It felt highly inclusive. And so that, from that first interaction, it continued through my entire four years of being here. My professors became my mentors. They became an extension of my technical discipline family. And by the way, they also held me accountable because our class sizes were relatively small. So at that time, you know, there were maybe 20 of us to one professor and it just allowed them to help personalize my journey in this space, which kept my interest high. And it also allowed me to work on a lot of great projects. That sense of community has stayed with me in the professional space. It also very much aligned to the company that I'm fortunate to be part of now, at Amazon. And that philosophy hasn't really changed. To me, it's a huge benefit here at the university and it's one that I definitely am thankful for. Don't take it for granted. And that's not just in computer science. There were other courses that I took beyond computer science that shaped that entire experience. I'll just name a few. Foreign languages. My English class. All of these courses. The professors and faculty were all the same — Highly engaged. Highly devoted to student experience. Pretty lucky.

Bryan Gentry: So, as an English major, I always love to ask people, especially if they've gone into a technology career and you specifically mentioned your English classes. How do those things connect and, you know, that broad range of classes that students have to take here. How has something like that impacted your career and your perspective on technology?

Francessca Vasquez: It's a really great question because in my role today, I not only interface with a variety of people, but also with what we call customers, Amazon customers. And those customers are global. Those customers have different business models. And one of the things that we do to convey ideas in our company is writing. And it allows us to have critical thinking. It also allows us to be able to communicate with customers that might have a different global, you know, presence in geography. And so I think that has really helped with communicating and being able to work with other builders. The other thing that the courses did is they taught a lot around leadership. And these are sometimes things that you don't realize until you're in your next journey beyond the university. So English, the foreign languages course, just super impactful. And so those of you that are in the STEM field, take an English course! You will need it. Pretty amazing.

Justin Cummings: So it's not just because your company started as a bookseller, it's-

Francessca Vasquez: Definitely no relation to that. I worked at a couple of other companies before my current one and all highly relevant. You know, there are some companies today that want to have proposals for why they should engage with you. And that again, that writing element becomes extremely important. So.

Bryan Gentry: You can't write those proposals in Fortran can you?

Francessca Vasquez: Yeah, I cannot. I wish I could because it would be much shorter, but I can't.

- Justin Cummings: A lot of people, when they think of Amazon, they think of free shipping. They think of Prime Video. They think of maybe like Amazon music. They think of shopping. They don't necessarily think about the computing side. And I've had a chance to see a little bit of AWS and a little bit of just the immense cloud computing side that Amazon has and that they've built up and kind of the technical powerhouse they've become on top of a shopping and a media powerhouse. Tell us a little about about AWS, a little bit about Amazon's foray into cloud computing and how you got into it.
- Francessca Vasquez: Sure. That was great. You teed that up. So Amazon Web Services is the cloud extension to Amazon and ultimately, they are really just a provider of being able to deliver a variety of compute services on demand, as you go. And the way that I like to equate it is to talk about companies that have built their businesses on the cloud platform. So many people are familiar with companies like Snapchat or AirBnB. A lot of these companies, the reason that they've been able to come to the market so quickly is because they've built a model that's 100% on the cloud, which allows them to innovate faster. One of our favorite companies that we helped transition to the cloud with our work at AWS was actually Netflix. You've heard of Netflix?
- Justin Cummings: Yeah, I've heard of it- a couple of times.
- Francessca Vasquez: They only manage a third of the Internet bandwidth, but when Netflix was trying to figure out a way to drive more personalization and streaming content, one of the fastest ways that they could touch global reach was by moving entirely to the cloud with a variety of different vendors. So I think what we've learned at AWS, because many people know Amazon, sometimes they don't know AWS. We've been very fortunate in that we've taken the customer focus of Amazon and we've applied it to the cloud computing part of our business. That's it.
- Justin Cummings: And it's an extremely intuitive program. Like, like I said, I'm not a programmer. I an electronic media emphasis here at the school, but I was able to understand at least some of the basic stuff of AWS to get into it. It's very user friendly. Does that kind of play into what you were talking about, about the customer-first model? Like the kind of accessibility,
- Francessca Vasquez: Yeah, it plays into the customer first model. It plays into the innovation of different paradigms and platforms today because they're more declarative. And so you're finding even with some of the languages out there now, like, Javascript Object Notation (JSON) or Python, they almost look like regular English statements and not necessarily some of the types of code we've seen in the past. What people want is an easy button to deliver value quicker. And so the innovation that I think that has happened in the software spaces, we've made things far more declarative, which drives adoption. People get excited, they understand it, and when things are easier to deploy, more people want to use it and go for it. So that's what we've seen.

Bryan Gentry: Python in particular is one of those languages where you just basically just need to learn what to do with semi-colon, and you know Python. That does seem to kind of be where we're going with that.

Francessca Vasquez: Absolutely.

Bryan Gentry: Now Francesca, you've mentioned a couple of times how cloud computing drives innovation and allows people to innovate quicker. What exactly does it do? You know, some people listening might not even know what cloud computing is, but what exactly is it and how does that enable innovation?

Francessca Vasquez: My best analogy for those not in the space, just wanting to understand cloud, is to think about how you consume your various utilities in the world today. When you walk into a room and you need, electricity and light, for most populations, you just flip on a switch and you've got all the energy that you need. When companies are trying to build out new applications or they're trying to take their businesses global, they need to be able to have that same type of utility as a service pretty fast. What the cloud does is, it takes a lot of computing that in the former day you would put in a big data center — and that data center would be comprised of servers that had information and databases and networks — They make that all into a utility that at the click of a button you can deploy those resources so people can build applications in minutes versus months and people can go global in minutes versus months or years. That speed and agility is what powers innovation. And I'll go back to the one customer or just one company, like AirBNB. I love AirBNB because they are a huge industry disruptor. They leverage many cloud providers. But what's unique about them is they've been able to scale a hospitality industry with virtually no capital assets. Meaning they don't actually have physical presence. Right? And so that's a disruption in business model. Arguably, you could say the same for companies like Uber and Lyft, where they've completely disrupted transportation. That is what, not just my company, but many cloud providers, that is the value that they bring to the industry.

- Justin Cummings: I feel like in the old days, many companies, you'd know where their headquarters are cause you know that's where all the giant stacks of computer towers are. But I don't even know where AIRBNB's headquarters is. I don't even know if they have one like that's.
- Bryan Gentry: I think it's headquarters is on a website.

Francessca Vasquez: They do. Yes.

Justin Cummings: Well that's what I'm saying. I don't know where the actual "corporate" office would be just because it is so delineated. And to me it's a mobile experience. You don't think brick and mortar.

- Francessca Vasquez: That's right. And that's the beauty. Everything's all driven through the Internet. All these services are all through the Internet, not through the light switch through the wall.
- Justin Cummings: With that. And if this isn't your field, that's absolutely fine. But Verizon just announced last week that they're opening up their first 5G studio where all of their programming and everything is running using 5G. So most people have probably heard 4G and 3G with their phones. 5G's like the next big thing, it's the new tech buzz word. Is 5G actually something we're going to need to consider, is it going to be good for cloud computing? Is it kind of just a pipe dream?
- Francessca Vasquez: You know, it definitely not just a pipe dream. I'll just say this, I think that when you think about how much information is flowing through the internet or through various networks today, there was a time when it all was originated through just computers or now laptops. Today, information is being generated on your phone. It's being generated through medical devices. It's being generated through the wearable watch that I have on right now. And if you think about the scale of everybody that has some type of connected device, I think 5G is one capability and technology that will absolutely revolutionize the way that we share and process information. And that's what the name of the game is: what you're doing around data and information long term.
- Justin Cummings: You forget just how many things you have in the house that are connected now. Like the guy that gets locked in the kitchen sends a message on Twitter from the Samsung Smart Fridge, like, "Locked in, send help." From the fridge. The things now that can send information, it's absolutely incredible.
- Francessca Vasquez: Billions and billions of devices all at the edge, not sitting necessarily just on your laptop. It's pretty fascinating.
- Bryan Gentry: A few years ago when my son who's almost seven, when he was a baby, maybe one or two years, he came to work with me one day. I went to an event where some students were doing something, and the students were just totally enthralled with this baby who was there. And one of them was holding my son and she turned to a friend and said, "Could you take a picture of me?" Her friend said, "I can't, I don't have my phone."
- Justin Cummings: That's amazing. How big the things are sharing are getting, like you can now edit 4k video on mobile, which just blows my mind. 'Cause two years ago, that was not a thing.
- Francessca Vasquez: I have to laugh because I spend a lot of time traveling all over the world and mobile phones — think about the impact of just the iPhone. I don't want to discard any of the Android users, but most iPhones and Android devices now are larger (in capacity) than the mainframes that we had in the past. In some cases, that, by the way, would take up this entire room plus the next two rooms. And so it's a lot more capacity, a lot. Again, lots of innovation happening in this

space. And then since we were talking about gaming and Zelda earlier, the other fascinating thing is to look at even some of the gaming companies out there where the business is not necessarily just about producing a game. It is now about an experience of streaming and the type of real time user experience you can have in the game, you know, at that moment. And so there's gonna be this, I think this continued amazing wave around content personalization, you know, data being powered by all sorts of companies with 5G, with cloud. You know, it's going to be exciting. It's like the next big iteration. Can't wait.
Justin Cummings: I can't remember who it was, but someone was talking about how when 4G was first being touted, Facebook didn't exist. When 4G was the very beginning, before it went wide, there was no Facebook. So imagine what can be possible on 5G. If 4G was able to give us Facebook, everything that stemmed from that, the next generation, it's impossible to predict, but it seems like you're going to be in that generation.

- Francessca Vasquez: I hope that I'm going to be part of it in some capacity. It's funny because you mentioned your, son and I have a 9 year old son as well, and I find myself having to compete with my personal assistant device that's in my household because if I tell my son the weather is going gonna be this, he goes, "No, I've already asked Siri, Alexa and Katana and everyone else. And they say it's gonna be this, so therefore I can wear shorts today?" It's like, okay. So that's some big problems coming ahead.
- Justin Cummings: Yes. The children learn how to use the smart home devices. That's when everything gets fun cause then you have to compete.
- Bryan Gentry:My kids made Google play some music by Johann Sebastian Bach recently. They
were trying to get Google to play chicken sounds, but it played Bach music.
- Justin Cummings: Bach. That's actually fantastic.
- Bryan Gentry: Francesca, I think about your light switch analogy about how cloud computing helps people to launch with that kind of flexibility. So more speed becomes available, more bandwidth becomes available and we fill it and we innovate with it. Do you have any idea what's next? What types of things will fill that space?
- Francessca Vasquez: I don't know. I think there's a lot of things that are happening around satellite innovation. I think there's a next wave of what we do with communications that are beyond what we're doing today. So that would be one prediction. I think another prediction is because there are billions of devices, data is going to be the center of gravity. And I believe that there are institutions and companies that have vast amounts of data that want to be able to do better things with that data to be able to create positive experiences for their customers. And so I think the area around data analytics and artificial intelligence and machine learning will be a trend that continues. People are doing it today, but it will

continue. And then the third thing that I think is pretty exciting is I think we're going to continue to see more innovation that happens from an outside-in perspective. It means that the experiences that each of us have as a consumer are the same types of experiences you want to have when you're a business or an enterprise. You want things fast, you want it secure, you want it reliable, you want it cost effective. Those are the things I think will continue to evolve over time. And I'm going to be around, hopefully, contributing in some fashion.

Bryan Gentry: Now I want to talk a little bit about your position as a leader in the industry. I read your LinkedIn profile a day or two ago and someone who had endorsed you, and talked about how fantastic a leader you are and obviously you've held various different positions in the industry. You also mentioned earlier that while you were in college here, there was an emphasis on leadership in some of your courses. I'd like to hear what are some things you learned about leadership here, but also some things you've learned through your career that you think people ought to know about.

Francessca Vasquez: Sure. By the way, thank you to whoever wrote the LinkedIn feedback. Appreciate that. I'm in constant learning mode, so I don't think I have it completely figured out. I think my view on leadership probably stems from my upbringing. My upbringing was very much exposed to the military lifestyle. My parents and siblings were all on the mission of serving our country. And so I think that was sort of my initial lens of what mattered. And so what matters to me and what drives me are things that have a bigger impact than just yourself. I'm very mission driven. And during my time here, this is why I talk about how unique this community is at the University of Lynchburg, there are so many different academic, social and service programs and clubs that people are able to participate in and early on I was encouraged to participate in the Student Government Association. I was a Connections Leader, which at that time meant you were part of a welcoming committee for prospective students and you could show them around and tell them all about the university, college, at the time. So I did that. I participated in Greek life. I didn't do sports here, but I was part of the annual Turkey Bowl. I did do like a little flag football. That was my sports exposure. And, uh, so I think all of those experiences have impact. And the other thing that I think that has impact is, I learned a lot through club participation. Academics are important, but I think that to compliment that, the Student Government Association and others exposed me to teamwork, to what it means to be part of a highly effective group, what it means to demonstrate leadership and be a representative of the student population. And that, to me, has had a tremendous impact maybe on how I continue to serve today and my capacity. I've learned a lot more and adjusted, but a lot of that started here at the institution. University of Lynchburg.

Bryan Gentry: What are some ways that that's been applied in the technology field?

Francessca Vasquez: One thing that you'll quickly learn in the technology field, even as a programmer, I had a big misconception that if I went down the computer science path I would (and I was a bit of an introvert) just be in a room

programming by myself and it would be all good and someone would send me a paycheck. What I quickly learned is software development has evolved and everyone's checking code in and checking code out and working on building out a code pipeline. And there are lots of teams, globally, and I was going to be working with a lot of people. And so I think being able to work effectively within a team and have influence was a big, big lesson learned here. I also remember the college at the time, they actually prepared a leadership development conference for a group of us. It was a four day conference. And within the conference we actually went to etiquette class. We learned how to eat, sit, drink properly. How that plays into my world now, sometimes if I have to travel internationally to go meet with other development teams in a different culture, there are certain customs that you do there and certain customs that you don't do. And I literally still revert back to the guide that I got at Lynchburg College at the time on what to do and what not to do in certain situations. So huge relevance in what we're doing here. Join a program, a club. It's very important. I wish I had done more in the debate club.

- Justin Cummings:As the captain of the debate team here at University of Lynchburg, you
absolutely should have. We have a great debate team here now.
- Francessca Vasquez: Justin, this was meant to be.
- Justin Cummings: This is like the perfect Dream Team here.
- Bryan Gentry: Zelda. Debate. Do you want to close the podcast with a debate about Zelda?
- Justin Cummings: I have, I can't stay three more hours. I could go three more hours on Zelda.
- Bryan Gentry: Okay, next episode.
- Justin Cummings: Okay, I'm down.
- Francessca Vasquez: You're the president of the debate club?

Justin Cummings: Actually, we're no longer a club. We're now officially a team recognized by the school. We're no longer a student organization. We are a team. So I am team captain of the debate side. And then we also do a forensics, which is like interpretive speaking, original speaking, all kinds of stuff. So I'm one of the two captains.

- Bryan Gentry: He's a renaissance man.
- Francessca Vasquez: Beneficial, mutually beneficial.
- Justin Cummings: Public speaking. Even if you think you're never going to speak to someone in your job, you will. The days of one person in a room coding are completely gone. And if you are doing that, you are not getting a paycheck for it.

- Francessca Vasquez: You're not. And it's great that you're doing that because you know writing. So we write a lot of blogs now about why it makes sense to adopt something, how to use the technology. And we also participate in a ton of conferences where people want to hear how you've used a technology, a game, whatever it may be. So speaking and writing are highly relevant in the tech industry. I mean, it's a differentiator. I'll close on this last comment because I used to have a misconception that, you know, being technical, I never needed to worry about things such as marketing and sales. Well that changes when you are perhaps starting your own company, where you're sales, you're marketing, you're the technical person. So I learned a lot working with startups as well and I now have adjusted my position and say, you know, you really, what I love about the university is, we are liberal arts and sciences and the exposure to all of those things have a significant impact in the technology space.
- Justin Cummings: Well, thank you so much for being on today. Thank you for joining us. Um,
- Francessca Vasquez: This is great.

Justin Cummings: Yeah, I love what we do here.

Francessca Vasquez: Yeah. Hashtag Hornet. Can I still do a Hashtag? Hashtag Hornet life?

- Justin Cummings: I think now we say "It's a Great Day To Be A Hornet," but let's do that. Hashtag Hornet. I like it.
- Francessca Vasquez: Let's do Hashtag Hornet!
- Justin Cummings: I don't know if there was, but let's make it. And it takes up less characters. I like it. Thank you for listening everyone, and we'll see you next time on A Smarter U.
- Outro Music: [music].