

TITAN TECH TALK

Fall 2019/Winter 2020

Innovative Experiences

Explore new high-tech spaces and utilize creative technologies

A Titan Returns
New AVP in IT has big ideas for Cal State Fullerton

Illustration by Bastion Andrews, BFA Illustration '20



Innovation

The intersection of creativity, imagination, and knowledge

Technology is the catalyst to innovation; but innovation cannot occur without a little imagination.

Self-driving cars, 3D printing, smart homes, screen-less displays, and even social media exist today because of the imagination and creativity of individuals. Knowledge and technology are used to create a world of infinite possibilities, but it takes remarkable innovators to turn ideas and dreams into realities.

Great technological strides have been taken in the last 100 years with the help of brilliant men and women who dared to wonder, “What if?”

What if there was a way to explore outer space?

What if we could connect with the world?

What if we could turn back the effects of climate change?

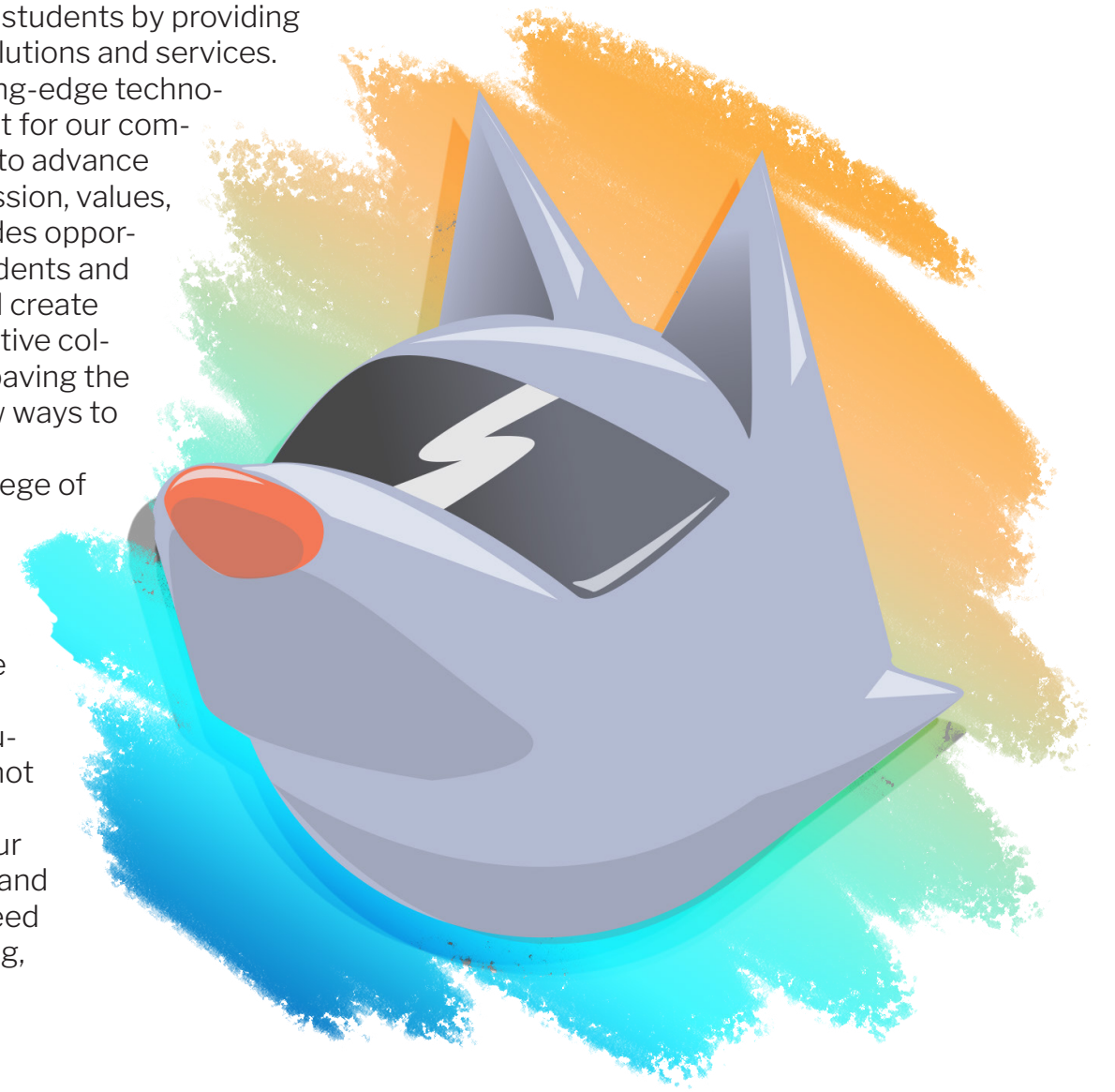
What if?

California State University, Fullerton’s Division of Information Technology fosters the curiosity and imagination of students by providing state-of-the-art solutions and services.

We provide a leading-edge technological environment for our community of learners to advance the University’s mission, values, and goals. IT provides opportunities for our students and faculty to learn and create through our innovative collaborative rooms, paving the way to explore new ways to teach and learn.

CSUF has the privilege of educating almost 35,000 students each year. Each student has the potential to change technology as we know it; to find solutions to problems not yet imagined.

We strive to give our students the tools and technology they need to get them thinking, “What if?”



*Illustration by
Bastion Andrews,
BFA Illustration '20*



Advanced Technology Lab

Let your imagination be your guide in the Innovation/Makerspace Center

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The Innovation/Makerspace Center helps expand artistry by providing students with advanced technology tools such as virtual reality, 3D printing, programming equipment, and high-end computing. Located on the second floor of Pollak Library North, the center's glass walls offer an open environment to encourage creativity and collaboration.

Students can unleash their imagination with the HTC VIVE virtual reality tool. Virtual reality can help students build complex three-dimensional environments or learn in a controlled virtual space. Bring artistic ideas to life with the Dell Canvas and Wacom Cintiq. These computer devices help art students and



Student uses Wacom Cintiq in the Innovation/Makerspace Center

enthusiasts create elaborate digital paintings, mock-ups, and templates. The Innovation/Makerspace Center has tools for collaboration and independent study, with Microsoft Surface Hubs, high-end computers, and augmented reality devices. Students, faculty, and staff

may reserve stations and faculty can likewise utilize the entire space for their class sessions. Visit it.fullerton.edu/innovation_makerspace_center/ for more information and to make a reservation.

Explore figures and information in the Data Visualization Center

Analyze large data sets, teach workshops, or give visual presentations in the Data Visualization Center. This high-tech room offers an immersive environment to teach classes or examine large data sets with a 184" high-resolution screen and four projectors. Faculty may reserve this space to take their curriculum to the next level. For more information, visit it.fullerton.edu/services/data_visualization_center/



Data Visualization Center

Utilize high-tech software in the Interdisciplinary College Collaboration Space



Interdisciplinary College Collaboration Space

The Interdisciplinary College Collaboration Space is designed to give students college-specific tools and software to aid in their coursework. Located on the 2nd floor of Pollak Library North, this is a high-tech computer lab with 10 workstations per college. Each workspace is equipped with the software students need. Each college space also includes a 65" Sam-sung display with Apple TV (AirPlay), mobile whiteboards and comfortable seating. For more information, visit it.fullerton.edu/students/computerlabs/collaboration_zone.php

An innovative mind at Cal State Fullerton



Rommel Hidalgo

Rommel Hidalgo joined the Titan family as a student after receiving his bachelors and MBA at the University of Guam. Young and enthusiastic, he was pursuing a graduate degree in Management Science and Information Systems when by a chance conversation with a peer, he decided to take a class taught by a highly recommended professor, Amir Dabirian. The Internet Technologies course was completely full, with barely enough computers to accommodate everyone. Students had lined up to audit the course and Professor Dabirian would not turn them away. “If they wanted to learn, he was more than willing to teach

them,” Hidalgo recalled. It was that course that inspired and eventually led Hidalgo on the path to where he is today, as the Associate Vice President and Innovation Officer in the Division of Information Technology. Hidalgo’s journey from student to student assistant, staff member, manager, and AVP all stemmed from CSUF’s MSIS program and Professor Dabirian’s course.

“From that class on, I was working on technical stuff I would not have done if I had not taken the course,” Hidalgo said.

After graduating, Dabirian offered him a position on his team in the Division of IT, but Hidalgo had already accepted a job elsewhere.

“Amir told me, I will call you in two weeks,” said Hidalgo. “He knew I would get bored with that job. Sure enough, within two weeks, I was bored.” Hidalgo was invited by Dabirian and then CSUF President Milton A. Gordon to participate in Gordon’s new Leadership program, solidifying his path to higher education leadership. It was shortly thereafter

that Hidalgo was promoted to Assistant Vice President in IT at CSUF.

Four years ago, a Chief Information Officer position opened up in Hidalgo’s alma mater, the University of Guam. Wanting to give back, Hidalgo left to implement some of the innovations in Guam that he had worked on here at CSUF.

“Innovation is a never-ending cycle of looking at the way we do things and seeing how to improve them.”

– Hidalgo

“I was at CSUF for almost 17 years. Guam benefited from my experiences at CSUF because we were able to push them to a higher level,” said Hidalgo. But something was missing. “I would see all of the things that were happening on the CSUF campus and I missed it,” Hidalgo said. “It was like I was away from family for three years. There are a lot of things happening on a day-to-day ba-

sis at Fullerton. The challenges we face transform you as a team. I missed the IT family.” When a new position for an Associate Vice President in IT opened up, Hidalgo immediately applied. In March of 2019, Hidalgo came back to his IT family and got straight to work. Hidalgo and his team have unveiled many projects in the fall semester. One of those was the Titan Digital Signage project. “I believe it’s going to transform the campus. We have large screens on campus to help enhance communication and wayfinding screens to help people locate offices and buildings,” Hidalgo said.

“Innovation is a never-ending cycle of looking at the way we do things and seeing how to improve them.” That is Hidalgo’s goal: To create innovative solutions to help foster academic success. “I believe this is one of the best campuses in the system and I’m glad this is the campus I selected for my graduate program,” Hidalgo said with a smile. “It was one of the best decisions I have ever made.”

Mobile Applications

With the rise and domination of smart phones, consumers require information on-the-go. Cal State Fullerton has met that demand with creative mobile applications. These tools are meant to help Titans navigate their way to academic success.

iFullerton

The iFullerton app helps students, faculty, and staff access campus-related resources easily through their mobile device.

The app, which was first released in 2008 and received a cosmetic update in the summer of 2019, is available for download on the Apple App Store and Google Play Store.

Users can view real-time parking information, look up events in the CSUF calendar, access their Portal and TITANium, and more.

Users may even customize their iFullerton home screens to view their top in-app applications.

As we work to improve our web and mobile interfaces, we hope to include more digital tools to help Titans navigate their way around campus.

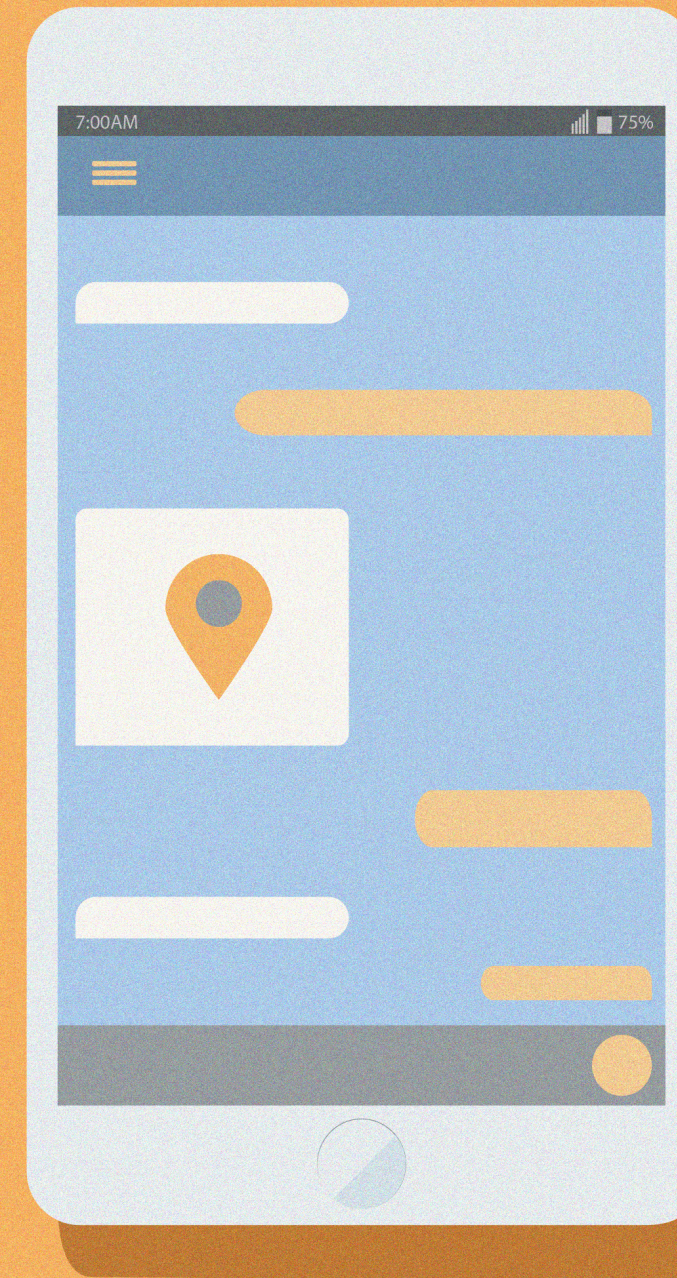


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iTuffy

iTuffy is your personal guide to CSUF. Ask iTuffy questions about the campus and receive interactive answers. This new chatbot uses Artificial Intelligence (AI) technology to provide up-to-date information.

Type messages or tap the microphone icon to ask your question. Once logged in, iTuffy can help give directions to classes, buildings, and on-campus eateries. It can also answer personalized questions about your CWID, campus schedule, and academic standing.

The Division of Information Technology was named a Digital Edge 50 award winner for the iTuffy application in 2018.

Download the iTuffy app on the Google Play store and Apple App Store.

Digital Literacy Program

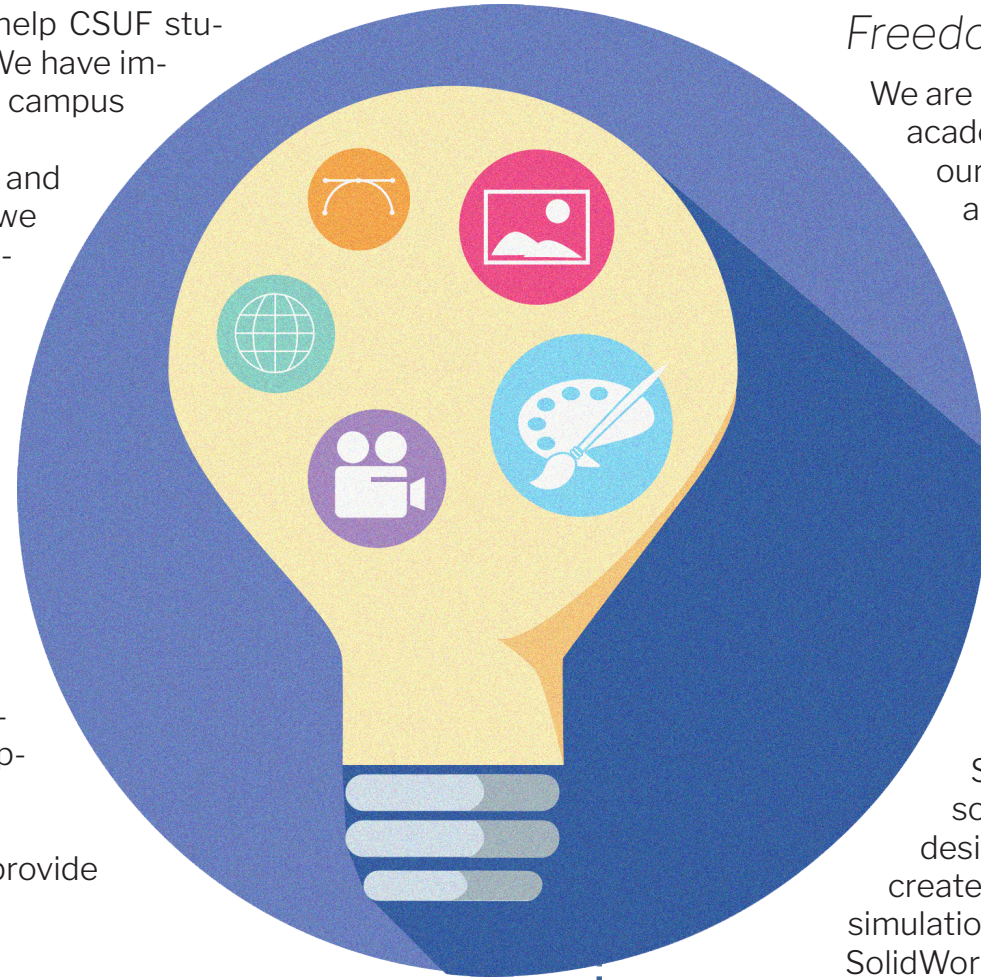
The Division of Information Technology's goal is to help CSUF students foster innovation and become digital citizens. We have implemented the Digital Literacy Program to provide the campus community with software workshops.

"We strive to carve a path for our students, faculty, and staff towards digital literacy. Through this program we offer a set of in-class software workshops to help students add digital tools to their repertoire," said Matthew Badal, Manager of Innovation. "Our goal is to not just give our students a competitive edge in their future careers, but to facilitate an understanding of technology as it evolves."

The program was piloted with a set of Adobe Creative Cloud workshops in a variety of different academic courses. Courses include: Business, English, Marketing, Health Science, and more. Workshops focus on Adobe Spark, Adobe Premiere Pro, Adobe Rush, Adobe InDesign, and Adobe Illustrator.

The purpose of these workshops is to encourage immersive storytelling and provide students with the opportunity to expand their skill sets.

Visit it.fullerton.edu to view all of the software we provide students, faculty and staff.

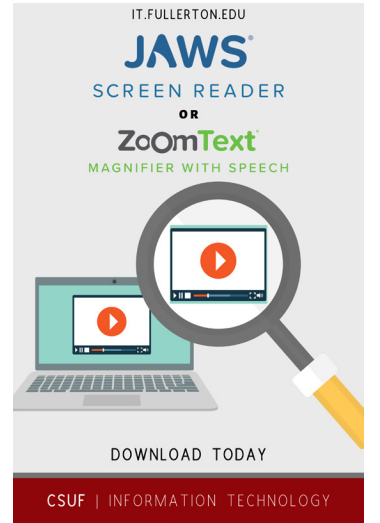


Fall 2019 New Software

Freedom Scientific: JAWS and ZoomText

We are dedicated to providing accessible technology to help aid academic progress and facilitate an environment where all of our students can succeed. In collaboration with CSUF Disability Support Services, IT purchased Freedom Scientific's JAWS and ZoomText this semester.

JAWS works as a screen reader while ZoomText helps screen magnification and enhanced visual elements. Students, faculty, and staff may choose to download either JAWS or ZoomText.



SolidWorks

SolidWorks 3D mechanical CAD (computer-aided design) software is now available for students, faculty, and staff. This design software is used by engineers to conceptualize and create 3D products. Users can perform accurate virtual model simulations like stress, fatigue, flow, vibrations, and more. SolidWorks is widely used in the automobile, medical, sports, and fashion industries for small to large scale projects.



View and download all available software on it.fullerton.edu

Once a Titan, Always a Titan

Welson Badal strolls into the south side of Pollak Library. He is taking his time - enjoying every step, acknowledging every student, faculty and staff member he sees. He has a smile on his face and is happy to be here. With each step retirement draws nearer, but it will not keep him away from his Titan family.

For over 30 years, Badal has walked the campus, mentored many staff members, and touched everyone who has met him with his kindness, generosity, and Titan spirit.



“I started with no friends at Cal State Fullerton and now I am leaving with many, many friends who have touched my life in one way or another,” Badal beams. “That is priceless.” Badal began his journey at CSUF on March 1, 1989 in the CSUF Physical Plant. “We had been working hard, learning a lot, accomplishing a ton of projects and having lots of fun in the process,” he said. Badal helped begin the Department of Administration and Finance IT (AFIT). At the time, the department consisted of just Badal and a student

assistant. It has since grown so much that when it was time for Badal to start a new path as an Assistant Vice President in the Division of Information Technology, AFIT had 23 staff members and eight student assistants. “I have been fortunate enough to have played a part in implementing almost all administrative systems on campus,” Badal said. CSUF is not just a place of work, but it is a second home for Badal. Work and family life intertwine within these familiar walls. His two sons, Matthew and Michael walked some



From left; Welson Badal and CSUF President Fram Virjee

of their first steps on the CSUF campus and years later, Badal cheered loudly as they walked across the stage at their Commencement Ceremonies. “My wonderful wife and I raised two great sons who are proud Titans and have been very involved on campus,” he said. “I am very proud of them. They are the best thing to ever happen to me and my wife.” As students, Matthew served as the VP of Finance in ASI and Michael served as both the VP and eventual President of ASI.

Matthew has followed his father’s footsteps and has recently taken a position as Manager of Innovation for the Division of IT. “As a kid I never really understood the bulk of what my dad did,” says Matthew. “But interacting with people who have worked with my dad and seeing all of the impact he’s made on the campus, I hope to one day be able to lead by his example. Not just in his work ethic, which is going to be a hard one to beat, but in his caring and thoughtfulness. That’s where I hope to be the most like him and show that I have the same

caring demeanor and heart.” Badal gazes over the newly designed Titan Promenade, a fixture representing the new CSUF and looks back on 30 years of hard work and dedication. “What a journey,” he breathes, “My journey has been both bumpy and exciting and I can show you some bruises. But if I had to do it all over again, I would do the same thing.” Badal will continue to provide a watchful eye on his beloved CSUF. He urges all Titans to heed communication and above all, care for one another. It is this kind spirit that has surpassed all the other immensely impressive accomplishments of Badal. His kindness and care has been felt and admired by all who have had the great privilege to work alongside him. Thank you, Welson, for your service, guidance, accomplishments, and care. We wish you a very happy retirement and know we will see you on campus soon.



From left; Welson Badal and VP Amir Dabirian



From left; Matthew Badal, Vanessa Hugon, VP Amir Dabirian, Welson Badal, Julie Virjee, Lana Badal, President Fram Virjee, Michael Badal, and Sarah Abdelaziz

Cybersecurity: A collaborative effort

Cybersecurity is the safeguard of computer systems and data from theft, extortion, disruption and damage. The Division of Information Technology takes cybersecurity very seriously.

We have begun to implement Duo Multi-Factor Authentication (MFA) for the campus community in order to add an additional layer of security to keep user information secure. Multi-Factor Authentication is the process of providing a password and another mode of authentication (a code) to confirm identity.

Learn more about Duo and MFA at it.fullerton.edu/campaigns_events/2fa/



Illustration by Bastion Andrews,
BFA Illustration '20

No, not that kind of phishing...

Phishing is an attack often done through email, telephone or text message where someone acts as a legitimate company or institution in order to get the victim to expose sensitive data like credit card numbers or passwords.

CSUF uses an email protection gateway, ProofPoint, to sort through potential phishing attempts. ProofPoint is able to detect, mitigate, and deter incoming threats.

Over the past year, ProofPoint has blocked over **415,000 incoming messages**. Nearly 400,000 of these messages contained URLs to malicious websites. The rest of the messages contain attachments (over 11,000) and message text threats (over 1,700).

Ransomware and phishing - Partners in crime

Ransomware oftentimes works with phishing attacks because if the victim thinks the attacker is a reputable source, they won't hesitate to open any attachments they send or click on the links they provide. Ransomware can be downloaded in the form of attachments such as a Portable Executable file (PE file), a word document, or a JavaScript file (JS file). Once the file is opened, the ransomware is secretly downloaded, leaving the system infected and files held hostage. It is typical at this point for the attacker to ask for money in some form (nowadays usually crypto-

currency), with instructions on how to purchase items or send the attacker money. The attacker will claim to only unlock the files once the money is sent. Thanks to technologies like ProofPoint, many of these attacks can be blocked.



Illustration by Bastion Andrews,
BFA Illustration '20

To help on-campus email recipients recognize possible spam messages, the Division of IT has taken steps to tag all emails which originate outside the CSUF organization by noting [External] in the subject line.

This will make it easier for campus email recipients to recognize a potential spam message. Any suspected spam messages should be reported to the IT Help Desk at helpdesk@fullerton.edu

Learn more at it.fullerton.edu/iso

