

RICE AT LARGE

Engaging With Houston Communities

William Edmond wants to help students pursue a college degree and make sure that their college experience is one they will always cherish.



PLAYING IT FORWARD

William Edmond is forever grateful to his professors and mentors who made his college experience a memorable one. They made him feel that he belonged and guided him in securing internships, meaningful student jobs and a degree in psychology.

Now, Edmond wants to pay it forward with undergraduates at Rice University. “I have made it my life’s mission to help others be more persistent in their pursuit of higher education,” he said. “Being in college should be the most exciting time in a person’s life.”

As assistant director of Multicultural Affairs, Edmond helps students organize cultural events that promote diversity at Rice. Edmond works closely with the Black Student Association (BSA) especially during Black History Month when the students participate in the Martin Luther King Day parade in downtown Houston, hosts the MLK

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A PODCAST FOR FIRST-GENERATION COLLEGE STUDENTS

When COVID-19 hit Houston, a group of Rice alumni decided to use their downtime to make a difference in the community.

Norma Torres Mendoza '13, Joseph Mapula '15, Luz Rocha '14 and Mijin Han '16, got together and created a podcast to make higher education information more accessible to first-generation college students. The “How to College: First Gen” podcast also provides information about career development and shares lessons about being a first-generation college student.

Since the pandemic began, the team has been meeting online every weekend to decide a course of action. With schools closed and no access to college counselors, they determined that this was an ideal challenge to address. Their market research indicated that although there were one or two college readiness podcasts led by professionals at colleges or universities, there were none for first-generation students.

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WILLIAM EDMOND

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vigil at the Rice Chapel and present lectures, films and discussions about issues in the Black community. For Hispanic Heritage Month, Edmond helps the Hispanic Association of Cultural Enrichment at Rice (HACER) present discussions and movies, among other activities.

He also mentors and creates leadership opportunities for students. A few years ago, Edmond and three Rice students — Yonas Tekola, Mark Laforest-Williams and Jeremiah Murrell — took the Black Male Leadership Initiative (BMLI), an informal student club, and provided a more sustainable structure by registering the group as an official student organization and gave it a mission. The mission is to improve the graduation rate of Black male students at Rice, develop leadership skills for Black males and foster a sense of belonging on campus for Black male students.

“BMLI exists to foster brotherhood within the Black male population at Rice,” he said. “The BMLI supports its members by providing opportunities for fellowship, intellectual growth and personal development, on and off campus.”

This year’s BMLI president, Rice senior Mathias Adamu, said his experience of working with Edmond on several projects has been very rewarding and he tries to emulate Edmond in being a servant leader.

“William is the type to push you to be a better leader by being there alongside you throughout your journey,” Adamu said. “He sees your potential and challenges you with opportunities to develop yourself and your leadership, so your potential is just as clear to you as it is to him. He never hesitates to sit down with you and talk through what you have going on and help you come up with the best solution.”

Just as Edmond paid it forward so has BMLI. With Edmond’s guidance, BMLI started a mentoring program for young Black male stu-

“We believe it’s important to introduce elementary students to our campus as early as possible. They need to see that attending college is within their grasp.”

— WILLIAM EDMOND

dents at Longfellow Elementary. The purpose of the mentoring program is to increase the confidence in the young students, encourage them to pursue a STEM career and to teach them about positive models of masculinity.

“School-age Black male students are subject to higher suspension rates, school expulsions and placement into special education classroom more than any other subgroup of students in public education,” Edmond said. This unfortunate reality is a situation in which Rice students can do their part to help others.

In another project, BMLI and Edmond hosted 200 elementary students for a half-day experience during which they toured the Rice campus and met with students, staff and faculty to learn about the college admissions process.

“We believe it’s important to introduce elementary students to our campus as early as possible,” Edmond said. “They need to see that attending college is within their grasp.”

This semester, Adamu, Rice senior Collin Whitaker and Edmond will be working together on yet another project. They plan to create a virtual program that will combat stereotypes and negative statistics about the Black community. The project will be called Stories Beyond Statistics and will consist of interviews conducted virtually with students and others who will tell positive stories about their lives.

“These conversations will be

in an interview format in which participants open up the talk with a negative statistic about the Black community, and then the participant will go on to address that statistic by offering a more positive image of the Black community,” Edmond explained.

Edmond understands the value of positive reinforcement. When he enrolled at North Carolina Central University in Durham, N.C., he said he felt anxious and overwhelmed in trying to navigate the academic world. He quickly formed an expanding network of professors and staff members who gave him guidance and encouragement. Those relationships helped him land several campus jobs, including managing a summer-bridge program for incoming students identified as at-risk students.

“My experience in undergrad collectively helped me shape my career trajectory in higher education,” he said. “The confidence my mentors instilled me allowed me to pursue higher education and student affairs as a profession at one of the best programs in the country, Ohio State University.”

After he received his master’s in 2016, Edmond remained at Ohio State and worked as an academic counselor and staff assistant to provided academic support to varsity student-athletes. A mantra, he said, he lived daily at Ohio State was “to create an extraordinary student experience.”

He came to Rice in 2017 and to this day, he said, he lives by that belief. “I do my best to actualize those words,” he said. “I genuinely value people at their core and want them to have the space to develop their identity in preparation for life after college.” ■

DAVID D. MEDINA

DIRECTOR, MULTICULTURAL
COMMUNITY RELATIONS
PUBLIC AFFAIRS

PODCAST

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They identified podcasts as the most viable method for delivering the information because it works for people on the go. Podcasts, they said, can be accessed on smartphones as well as desktops, through Apple, Spotify and Google. Podcasts are superior to reading information from a book because listeners can hear the thoughts and emotions in the voices of real people.

Roxana Rivera, a Middlebury College alum, is a first gen and podcast listener and agrees with the podcast's developers.

"My favorite episode so far is the first episode of the 'Imposter Syndrome' series because of how much I can relate to it. I can sincerely say that this episode

helped me understand the many experiences and feelings I went through throughout my education, especially in high school. I never really knew how to explain how I felt or even why I felt the way I did. I felt like I did not belong in a rigorous education setting or was not worthy enough, until I listened to this episode."

"The podcast's target audiences range from high school students to first-generation college students to graduates to parents of first gens who want to know more about how to prepare their children for college," said Han.

About 800 people have tuned in to the podcast so far. The highest percentage of listeners range from 18 to 30 years of age, though the hope is to attract more listeners under the age of 17, because those are the ones currently applying to college. Listeners hail from as far



away as Ireland and South Africa though most reside in Texas and California.

Moving forward, the podcast creators want to expand the program by providing more episodes, but to do that they will need more volunteers. The podcast creators all have full-time jobs and are in dire need of help to produce the segments. They also want to ramp up marketing for the program to high school students and provide

stipends for their interns. Also, the group will be filing for a nonprofit status to raise funds and keep up with the demands.

"The demand for the podcast is beyond our imagination," said Mendoza. "We've had more than 800 plays already, which is incredible. We know now more than ever that it is crucial for first-generation college students to not feel alone in their educational journey." ■

JAN F. WEST

ASSISTANT DIRECTOR
MULTICULTURAL COMMUNITY
RELATIONS
PUBLIC AFFAIRS

CONFERENCE TO FOCUS HOW COVID-19 INFLUENCES DATA SCIENCE

The virtual Ken Kennedy Institute Data Science Conference Oct. 26–28 focused on COVID-19 and how the pandemic has influenced the use of data and data science. Speakers discussed everything from the genome analysis to data governance, from human behavior to water treatment plants and highlighted the role of computing hardware and software in these endeavors.

For the past four years, the annual conference has been interested in exposing how data science can be used to address

interesting challenges for translating data to knowledge through advances in data engineering, analytics, machine learning, deep learning, reinforcement learning and more broadly, artificial intelligence. Recognizing that discovery and innovation happens at interfaces of disciplines and communities, the conference aimed to bring together a diverse set of people from multiple communities spanning academia and industry.

The conference also featured talks by leading experts, which were complemented by thematically organized sessions with talks

selected from submitted abstracts, such as COVID-19, algorithms, foundations, business impact and health care. There was also a student poster session and networking breaks.

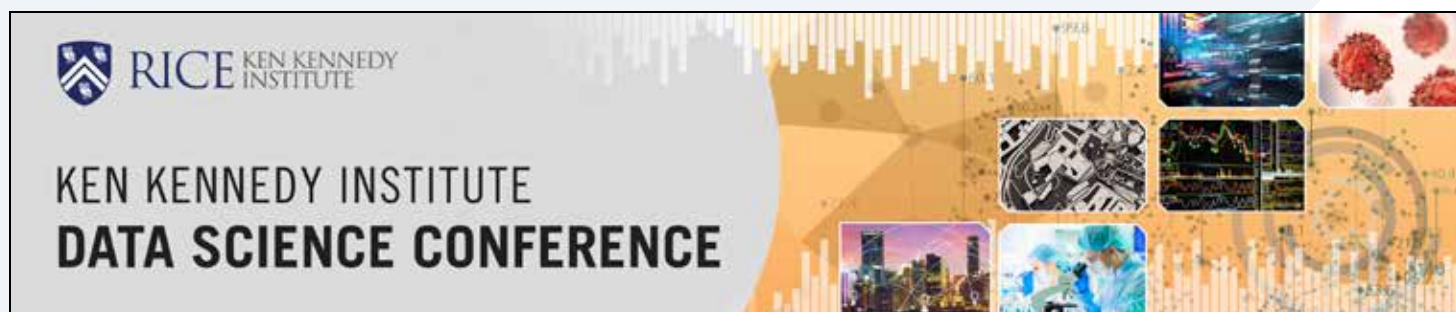
Amongst the speakers, David Eagleman, examined the collapse of previous societies and asked how the advent of the net fundamentally changed our existential equations. Eagleman is a neuroscientist, a New York Times bestselling author, a TED speaker and a Guggenheim Fellow.

This year the conference was expanded and included a special collaboration with MD Anderson

and offered a discussion about the Data-Driven Determinants for COVID-19 Oncology Discovery Effort (D3CODE), which was established to create a cross-functional, institutionwide data science initiative linked to understand cancer in the context of the pandemic. ■

ANGELA WILKINS

EXECUTIVE DIRECTOR
KEN KENNEDY INSTITUTE



FURLOUGH KITCHEN

Nathan Lonsdale Bledsoe '09 and Lucas Marr '08 became friends at Rice through their love of cooking.

When Hurricane Ike thundered through Houston in 2008, both helped the servery chef at Lovett College make meals for everyone staying on campus through the devastating storm.

Now another crisis, the COVID-19 pandemic, has brought the culinary duo back together again to serve the greater good of the community. They have created the Furlough Kitchen Houston, a pop-up restaurant that offers high-quality meals to anyone who has been furloughed, laid off or are simply struggling to make ends meet during the pandemic. And proof of need is not required.

"I have a pretty deeply held theological belief that we shouldn't test folks who say they need some help," said Bledsoe, who has been a pastor since 2013. "Some of the people coming through the line have been out of work a lot longer than COVID has been a reality."

Marr added that most of the people receiving the meals are down on their luck, but some are

picking up meals for their elderly neighbors. "We feel like there is a lot of shame around food insecurity in this country and people are hesitant to use food banks or soup kitchens," Marr said. "We hope that with a name like Furlough Kitchen that it doesn't have any of those preconceived notions about getting a good hot meal when you need it."

Furlough Kitchen operates out of St. Stephen's United Methodist Church, where Bledsoe is a pastor. The church is located at 2003 W. 43rd St. in Oak Forest, a neighborhood in northwest Houston. The kitchen is not a dine-in place but offers curbside pickup on Tuesdays and Thursdays from 4:30 to 6:30 p.m. at the church. The process is contactless as volunteers place the packaged meals in the backseat, trunk or cargo area of vehicles.

Since the first meal was served April 28, Furlough Kitchen has provided more than 1,000 meals. The kitchen gives 15 meals each Tuesday and Thursday to families from nearby Stevens Elementary School, and then provides 100 to 110 meals to people who drive in for pickup.

"We focus on making sure that we have hearty portions for all our meals," said Marr. "It would not be difficult for each plate to easily feed one adult and one child."

Not only are the portions generous but they are made by chefs who cook whatever they like to cook. Chefs Christian and Alexandria Catalan, who were laid off from their jobs at Morsel & Crumbs Catering, prepare the meals on Tuesday, and Bledsoe and Marr prepare them on Thursday. The four have offered such appetizing food as jambalaya, Mexican carnitas and enchiladas. One week, Marr, who runs a barbecue catering service on the side, brought his trailer pit and cooked barbecue chicken.

"We're not intending to serve the cheapest possible meals and, of course, we're not serving filet or lobster, but I think if a cook likes what he or she is cooking, the results are better," Marr said. People who want a free meal can simply go to the Furlough Kitchen website and order up to five meals.

The idea to start Furlough Kitchen came to Marr after viewing the website of a group from Dallas who had started a similar kitchen. The Dallas group offered to setup franchises in other cities. He and Bledsoe went to work and within two weeks had put together a nonprofit organization so that they could accept donations.

Furlough Kitchen has received support from St. Stephen's United Methodist Church, the neighborhood and friends. Also, the Rainbow Lodge, Hartz Chicken Buffet, Frenchy's Fried Chicken and Artisana Bread have provided food and ingredients for the meals. Recently, Furlough Kitchen partnered with The Common Market Texas, which is a nonprofit that provides organic produce, to sell their products and receive a portion of the proceeds.

Marr majored in mechanical engineering at Rice and worked for several engineering companies in Houston. He admits that starting Furlough Kitchen was a way to get out of the house and do something he enjoys, especially cooking for big groups the way he and Bledsoe used to cook for the Owlcoholics Tailgates at Rice football games.

"This was an easy way for me to help some folks out and enjoy cooking for big groups again," he said. "In the month that we have been doing this, I've seen how much good we are actually doing. The thanks we get from people enjoying our meals has been really rewarding."

For Bledsoe, who double majored in history and religious studies, said the Furlough Kitchen aligns well with the core values of his church, which states that everyone is a beloved child of God, that the church does not belong to them and that God is in the neighborhood and not just in their building.

"With these values, using our resources and space to do something like the Furlough Kitchen was a no-brainer," Bledsoe said. "This has been a really meaningful and exciting way to use the church's facilities." ■

DAVID D. MEDINA

DIRECTOR, MULTICULTURAL
COMMUNITY RELATIONS
PUBLIC AFFAIRS



COMFORT FOOD: Rice alums Lucas Marr and Nathan Lonsdale Bledsoe are serving free high-quality food to those who have been furloughed or are struggling to feed their families.

DOING THE NUMBERS DURING COVID-19

The COVID-19 pandemic did not stop the Rice University School Mathematics Project (RUSMP) from offering its highly popular Summer Campus Program (SCP) for pre-college teachers. The camp went virtual and successfully ran June 8–18, with the enlisted help of the Rice/NSF Robert Noyce Master Teaching Fellows (Grant #1556006).

Teachers from the Greater Houston area and beyond enrolled in the SCP and were placed into three cohorts: elementary grades 2–5, middle school grades 6–8 or high school geometry-calculus. Each cohort convened on Zoom for three hours each morning and worked individually or virtually in groups for three hours each afternoon.

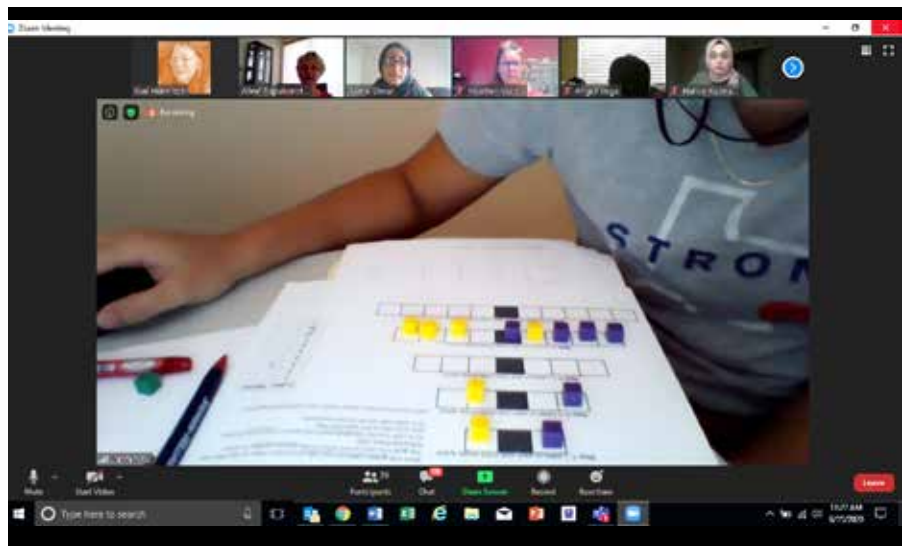
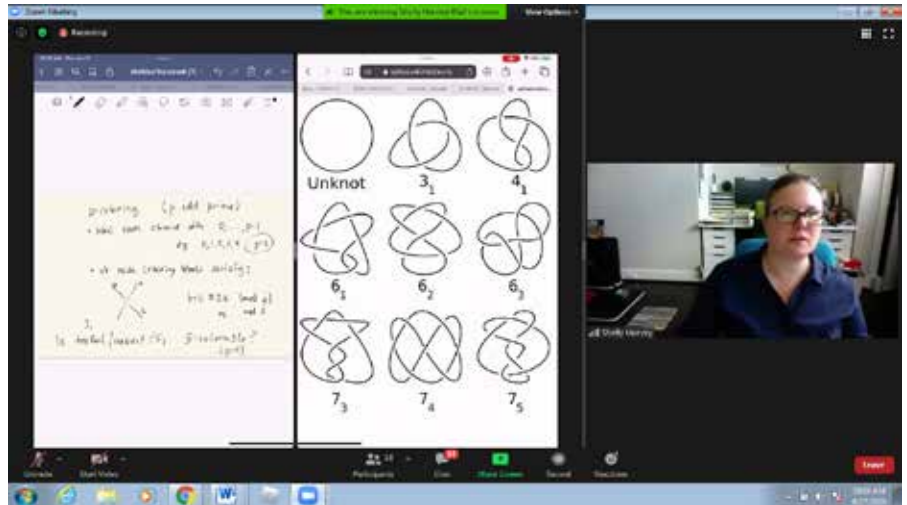
Lessons were carefully planned for the online learning environment. Technology tools were selected to actively engage teachers, web-based resources for teachers to use with their students were identified (rusmp.rice.edu/resources) and techniques to develop successful communities of practice for use during SCP were discussed.

Three Noyce Fellows worked with the elementary cohort and focused on exploring number concepts in grades 2–5. Four fellows focused on developing algebraic reasoning in the middle school grades. Four fellows explored topics on how to inspire students about high school mathematics. Planning meetings for the cohorts were held using Zoom during the spring semester and daily during the SCP, and Google drives, which housed course materials, were set up for each cohort to use with their teachers.

A variety of technologies and websites were used. Document cameras served as web cams, laptops allowed for modeling hands-on activities, Virtual Manipulatives and GeoGebra Geometry software facilitated construction of a Golden Rectangle and inscription of a regular pentagon in a circle. Pear Deck, Numberphile and RUSMP Symbaloos were also showcased. Teachers submitted responses and interacted using Nearpod, Kahoot!, Padlet, Flipgrid, Whiteboard.fi and via email. The use of Zoom breakout rooms was a huge hit as it provided an authentic way for teachers to collaborate.

The SCP camp has been running for 33 years and all the activities it offers transitioned seamlessly to an online environment: readings and discussions, independent and group work, lesson development, and integrated math and art activities in the elementary and middle school cohorts. Also a colloquium talk, “A Glimpse Into the World of Knot Theory,” for the high school cohort was delivered by Shelly Harvey, Rice Department of Mathematics professor and RUSMP advisory board member.

RUSMP directors Carolyn L. White, Robin Ward and Anne Papakonstantinou praised the efforts, com-



mitment and creativity of all involved — the teachers and Noyce Fellows — to make this inaugural online SCP successful. A plethora of lessons were learned by all, and the teachers felt better equipped, energized and ready to tackle the challenges of online learning this fall.

For photos from this year's SCP, please visit <https://rusmp.rice.edu/about/photos-spotlights>. RUSMP's Fall Networking Conference, held Oct. 3, also virtual, described the challenges and successes of online learning and showcased what happened and what was learned during the SCP this past June. ■

ANNE PAKONSTANTINO, DIRECTOR
CAROLYN L. WHITE, ASSOCIATE DIRECTOR
ROBIN WARD, ASSISTANT DIRECTOR
RICE UNIVERSITY SCHOOL MATHEMATICS PROJECT

VIRTUAL INSPIRATIONS:

Precollege teachers attended a summer camp to learn how to use websites that will be useful in preparing for teaching math online.

THE BRIDGE TO INTERNATIONAL COLLABORATION

Rice University's Puentes Consortium was created more than 10 years ago to provide scholars with an opportunity to carry out multidisciplinary research on issues of importance to the relationship between Mexico and the United States.

In 2018, Puentes was revitalized and included among its members Rice University, the University of Miami, Monterrey Tech, the University of Monterrey and the University of las Américas, Puebla.

That year, the consortium launched a series of new programs and funding opportunities to support its goals of enhancing collaborative research among its members. Puentes funds projects that seek to increase connection between the universities in the two nations. The purpose is to create a long-term effective dialogue by building knowledge and incentivizing joint research whose findings will be communicated to leaders and decisionmakers.

Over the past 12 years, Puentes has supported international mobility for over 23 scholars and published more than 25 academic research and white papers. Puentes is now preparing the 2021 call for applications for grants and programs under remote conditions. These opportunities are available to all members of the Rice community.

A NETWORK OF

KNOWLEDGE: The Puentes Consortium is bringing together scholars from Mexico and the U.S. to exchange knowledge and create research networks.

Binational collaborations have already fostered invaluable experiences for the researchers and helped in moving forward the relationship between U.S-Mexico and provided knowledge transfers between the two countries.

For example, a recent collaboration project between Monterrey Tech and Rice University during the first months of the COVID 19 pandemic resulted in a valuable mapping case project. Puentes provided a grant to support a group of researchers to share their expertise by reproducing a map of COVID cases for Texas and extrapolating the same information layers to report on COVID cases in Mexico. The Mexican map was produced by Roberto Ponce from Monterrey Tech and the Texas map by Fares el-Dahdah, director of the Humanities Research Center. This academic partnership could eventually lead to a comparative study about inequality and Covid-19 between Texas and Monterrey.

Another example was the Crime Assets and Best Practices Against Money Laundering project, in which members of the consortium participated in editing a high-level document that contained information on how to battle money laundering and organized crime in Mexico and the United States. The information in the document was gathered through a series of workshops led by Puentes scholars and

representatives from financial intelligence units in the northern states of Mexico and the U.S.

The Disruptive Housing project, led by academics from Rice University's school of architecture and humanities, resulted in a workshop that focused on Mexico's collective housing practices in urban settings.

These experiences demonstrate the value of international collaborations in which hosts and visiting scholars benefit from the exchange of knowledge and the creation of research networks. The goal of this enterprise is to produce books and manuscripts written by several authors who will share the knowledge they have acquired through the spaces created by the Puentes Consortium.

For more information about the Puentes Consortium, please visit the website at www.puentes-consortium.org. ■

IVONNE CRUZ

PROGRAM ADMINISTRATOR
PUENTES CONSORTIUM
BAKER INSTITUTE



RICE UNIVERSITY AND SPRING ISD PROMOTE DAILY LEARNING

Spring ISD has partnered with the Rice University Department of Athletics this fall to encourage daily student learning, whether in-person or virtual.

Students in K-12 will have an opportunity to win a ticket to a Rice Owls baseball game and a campus tour that will take place in spring 2021. To qualify, students only need to attend class with a teacher, show daily progress in school or submit an assignment. All of these efforts qualify to show daily student learning.

Teachers will be monitoring students' progress throughout the fall semester starting Tuesday, Sept. 8. In addition to the baseball game and campus tour, up to 100 K-8 students will be given a chance to be recognized on the field and enjoy a pregame "field day" inside Tudor Fieldhouse or the Waltrip Indoor Training Center.

"We're excited to be partnering with Rice to encourage our students to actively engage in learning every day," said Mark Miranda, executive chief of district operations. "Whether online or in-person when available, we want all of our students to show up every day."

Students who want to participate don't need to do anything but show engagement in all of their classes. Winners will be notified in January. ■

SNACKS FOR ALL

A couple of Rice University MBA students used their business skills this summer to give medical staff and the economy a small boost to combat the COVID-19 pandemic.

Coco Ma '20 and Kathleen Harcourt '20 created a nonprofit organization that delivered free meals to medical staff who treated patients infected with the virus.

"Medical staff were making tough choices and working hard to protect our community," said Ma. "We wanted to boost their morale while also supporting small local businesses staying open," said Harcourt. At Rice, Ma specialized in marketing and entrepreneurship and Harcourt focused on finance at the Jones Graduate School of Business.

SnacksForMedStaff, a nonprofit whose logo is "Help Medical Workers and the Economy, One Snack at a Time," raised \$20,000 through word of mouth and the online fundraiser GoFundMe. The money was used to buy meals and energy drinks from local restaurants and stores and delivered via UberEats and DoorDash to various hospitals in Houston and around the country.

About 3,300 meal packages were delivered to 23 hospitals such as Houston Methodist, Ben Taub, Memorial Herman in the Woodlands, Lyndon B. Johnson, Davam Urgent Care, Aspire and HCA in Conroe. Deliveries have also been made to hospitals in New York, Pennsylvania, Michigan and California.

The response from the medical staff was heartwarming. "They always told us how incredibly grateful they are and how much it means to them that we are doing this," said Harcourt. "Many of them were stressed out and exhausted and receiving a small token of thanks really lifted their spirits to keep going forward. A few times tears were brought to



SERVING OF SUPPORT: Rice MBA students provided snacks to medical staff as way to thank them for combating the pandemic.

their eyes because someone had thought of them."

Taking care of health care workers was dear to Ma, who grew up in Hangzhou, China, and had heard the hardship that medical staff have endured there. "In the past several months, I had seen so many heartbreaking stories about frontline medical workers passing away due to coronavirus. Many health care workers had mental or physical breakdowns because they

"Medical staff were making tough choices and working hard to protect our community. We wanted to boost their morale while also supporting small local businesses staying open."

— COCO MA '20

lacked personal protective equipment and heavy workloads."

She added that the hospital, where her mother works as an upper-level administrator, had literally treated thousands of COVID-19 patients. "I remember one day my mom sent me a message saying she went to work that morning but the hospital couldn't give her a mask because they had run out. But everyone still worked hard to treat patients like any other day."

After watching through Chinese media how people were sending food and energy drinks to the health care workers, Ma said she thought about doing something similar in the United States. She proposed the idea to Harcourt, who loved it.

"At first, we only intended to spend our money and just send a few meals," said Harcourt, "but once our classmates found out what we were doing, they started giving donations and sending us contacts at hospitals, and gradu-

ate student, Eric Schumacker '22, spent a lot of time creating our website."

SnacksForMedStaff, Harcourt said, took a life of its own and gave her and Ma a sense that they are making a difference during this crisis.

"We wanted to do something good for the community," she said. "We were feeling down about how hospital workers were experiencing sometimes war-like situations with COVID-19 and how small businesses were closing and leaving people unemployed. This nonprofit empowered us to do something about it." ■

DAVID D. MEDINA
DIRECTOR, MULTICULTURAL
COMMUNITY RELATIONS
PUBLIC AFFAIRS

TEACHERS LEARN HOW MACHINES CAN IMPROVE OUR HEALTH

Every summer, the Rice Office of STEM Engagement (R-STEM) brings K-12 teachers to campus to conduct discovery research, but because of the pandemic, the program went virtual.

The Summer Web-Based Institute for Technologies in CompSci and Healthcare (SWITCH) brought together six computer science educators from Houston and Austin to conduct research virtually in the lab of Ashutosh Sabharwal, the Ernest Dell Butcher Professor of Engineering and chair of the electrical and computer engineering department.

The main theme of the SWITCH RET summer research was Machine Learning for Health. In recent years, machine learning has become a state-of-the-art solution for many challenging problems and if used strategically, could improve health care availability and affordability.

This idea of using computer programming to improve health care outcomes is the focal point of both the NSF expeditions in Computing and Precise Advanced Technologies and Health Systems for Underserved Populations that Sabharwal's team is spearheading.

The teachers explored gaze detection through Python programs that processed a live feed video to track the iris of the person being imaged. Under the guidance of graduate students,



especially Mary Jin, teachers mastered the OpenCV library for computer vision; explored popular machine learning engines such as Tensorflow and Kaggle; and created programs that highlighted facial detection, landmark detection and emotion detection while linking these programs to creating low-cost and effective health technologies for underserved communities.

Also, various university faculty members and graduate students volunteered to share their research with the cohort. Gerard Côté, director of the Center for Remote Health Technologies and Systems at Texas A&M, gave a presentation about reliable, at-home technologies that can limit the need for hospital visits, while

Kristen Antoine-Morse, assistant principal at Istrouma Magnet High School in East Baton Rouge Parish Schools, gave a talk on implicit bias and its presence in classroom settings.

Further still, Temiloluwa Prioleau, assistant professor of computer science at Dartmouth College, spoke with the group about computer scientists using various types of data to assist in the process of creating a vaccine for COVID-19. The interns were able to interact with over a dozen more speakers on various topics pertinent to their project.

During their summer virtual research experiences, interns were able to learn, engage, create and share. The topics explored were pivotal in developing engaging grade-level appropriate lesson plans that will be tested in their classrooms and have been submitted for publication in education journals.

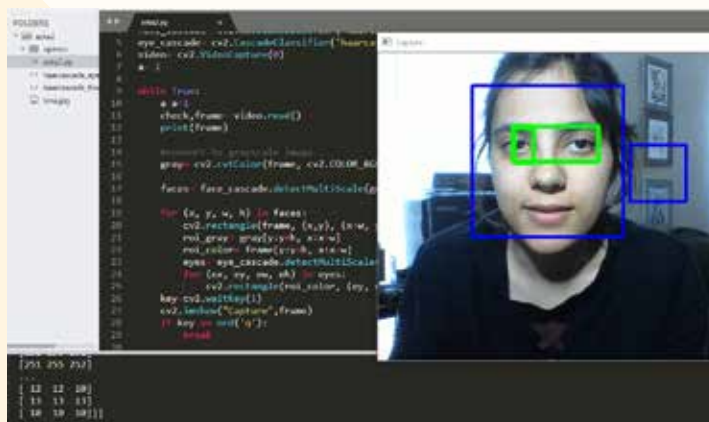
The lessons range from students using face detection in a health and wellness context to students creating tools that can help parents of nonverbal children communicate with them.

"I have become more acutely aware of how 'powerful' research and data play a significant role in solving problems," said Azka Bukhari, a middle school computer science teacher in the Houston Independent School District.

This work was funded by both the National Science Foundation's Expeditions in Computing and PATHS-UP ERCs. The journey of the SWITCH interns can be read on their blog at <https://ret2020.blogs.rice.edu/>. ■

ALLEN ANTOINE

ASSOCIATE DIRECTOR FOR
MATHEMATICS AND COMPUTER
SCIENCE
RICE OFFICE OF STEM ENGAGEMENT



PROGRESSIVE PROGRAMMING:

Azka Bukhari, a SWITCH intern, displaying her code for facial recognition.

ABOVE: Christopher Franklin, a SWITCH intern, working out the specifics of gaze detection.