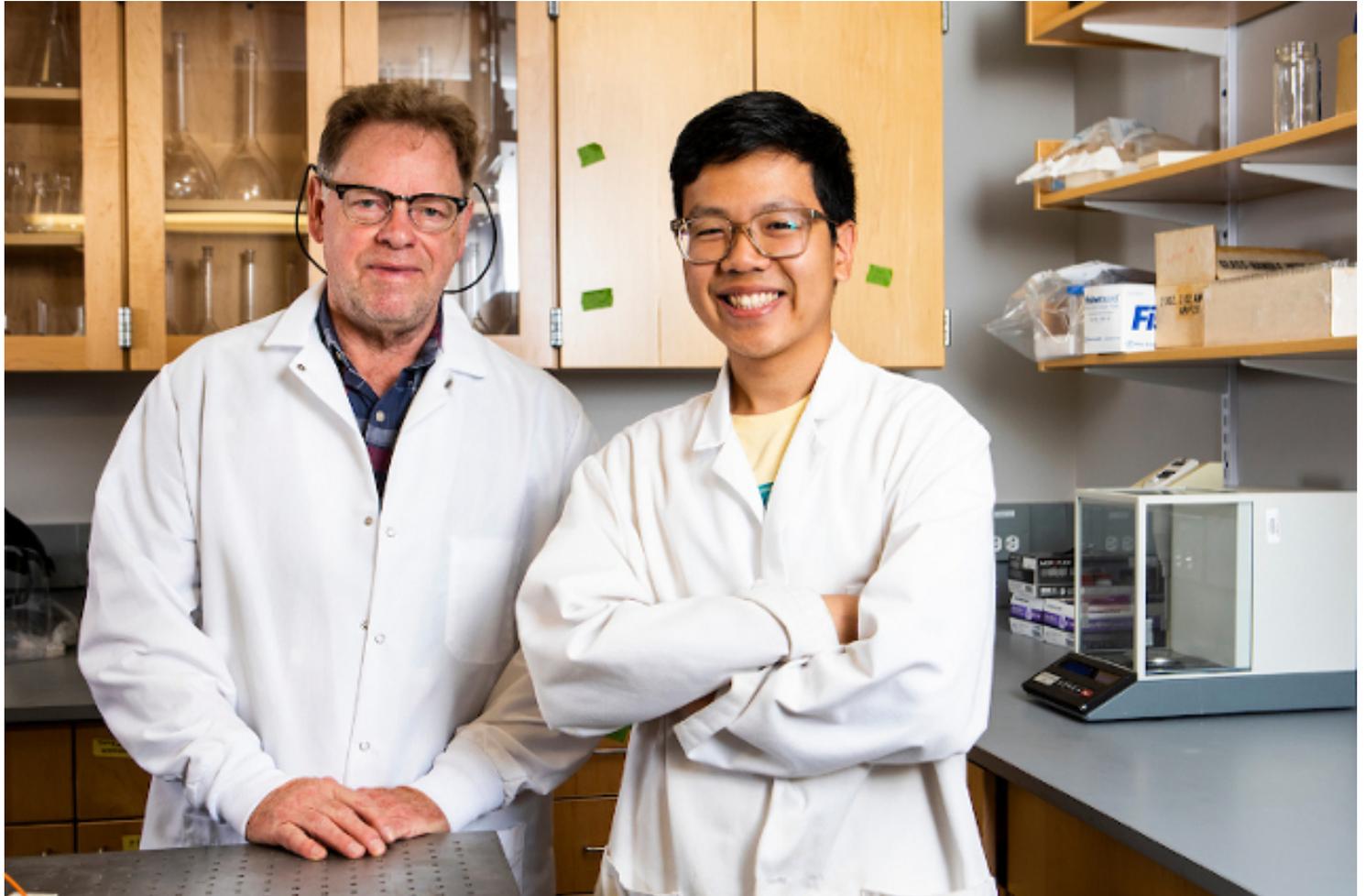


## On the Job Learning for Undergrads

Students from underrepresented backgrounds doing research with Tufts faculty this summer talk about their experiences



Binh Nguyen with chemistry professor Jonathan Kenny. "I really appreciate being able to apply the general concepts I've learned in chemistry and biology classes and seeing all those things come together," said Nguyen. Photo: Anna Miller

By Monica Jimenez

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Whether diving into the history of a local beach for an art project or programming solutions to interpret drone data, the fifteen students in Tufts' Visiting and Early Research Scholar Experience (VERSE) (<https://as.tufts.edu/verse>) program have been busy learning on the job this summer working with Tufts faculty mentors.

VERSE, now in its second year (<https://now.tufts.edu/articles/getting-head-start-research>), brings college students from underrepresented backgrounds to Tufts for ten weeks during the summer, working nine to five, Monday through Friday on projects tailored to their interests. This allows them to immerse themselves in the

research process, gain experience relevant to their fields, develop relationships with mentors, and do work with real-world impact. In addition, they attend social events with their VERSE peers and have office hours with VERSE staff.

“The goal of this program is to enable students to connect to faculty mentors with active research labs and projects, and gain valuable hands-on training that will build their confidence in conducting research and equip them to design their own research projects in the future,” said Jackie Dejean, assistant dean of research at the School of Arts and Sciences and the head of the VERSE program. “In this way, we can help students find the inspiration to pursue doctoral studies at Tufts and envision research careers.”

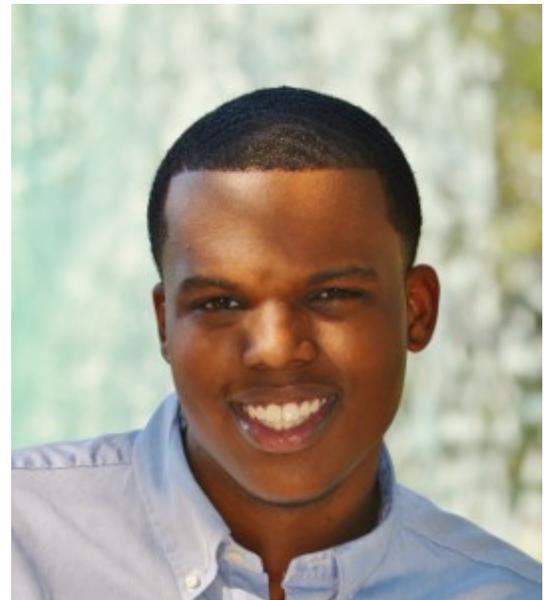
As they were heading into their final week of VERSE, four students shared their experiences with *Tufts Now* in their own words: Marcus Thompson, Alejandra Garcia, Gloria Kitchens, and Binh Nguyen.

### **Marcus Thompson**

*A rising senior and psychology major at Morehouse College in Georgia—and a VERSE student returning to campus for a second year to work with psychology professor Ayanna Thomas—Thompson ran experiments on memory and stress.*

People told me I would always be learning in this program. I said, “Oh no, you can’t *always* be learning”—but I’ve figured out by now that’s the way it is. The experiment I’m working on involves measuring the stress hormone cortisol through saliva samples, which I’ve never done before—and it turns out there are a lot of biomedical findings about how the caffeine you consume can impact your cortisol levels, which are really interesting.

I’ve learned that this kind of research is challenging, but it’s definitely rewarding. If you publish your findings, it’s a great accomplishment not just for yourself, but for your peers, and human knowledge overall. I’ve always been interested in trying to understand people in order to help make them better, and ultimately I want to be an internal medicine holistic mind-body physician. Instead of just dipping my toes in the water, VERSE allowed me to jump into the lake with my full body and experience all the aspects of that kind of research in academia.



Marcus Thompson

### **Alejandra Garcia, A19**

*A history and American Studies major who graduated from Tufts in May, Garcia researched the gentrification of Lincoln Beach in New Orleans for an art project by Danielle Abrams, a professor of the practice at School of the Museum of Fine Arts at Tufts.*

Alejandra Garcia

As a historian, finding the story has always been my biggest interest. I like to know the events from beginning to middle to end, and to understand why something came to be. Working on this project, I’m learning how to

tell the story better by reaching out to places like museums and archives in New Orleans. I've learned you have to be very specific about what you need and to keep track of what you get.

It's exciting because I'm not just doing it for my own pleasure or to get a certain grade—it's also going to help other people gain a greater understanding about this place and these events and how much they meant to so many people.

I never really got the chance to get this kind of research experience in my earlier years, and I think it's very lucky that I'm getting it now—especially because most students in the program come from similar underprivileged backgrounds, and we're all trying to figure it out together.

### **Gloria Kitchens, A21**

*A rising junior and computer science and applied math major at Tufts, Kitchens worked with mathematics professor Todd Quinto, programming MATLAB software to get better visual reconstructions of drone data.*

I've had one class where I used MATLAB before, but I didn't know what was involved in research. I've learned a lot about the process of trial and error and keeping all the results organized. I also didn't know all the implications of what could be taken from research.

Professor Quinto told me this project could be helpful for the Air Force; if they have a drone, it can get a better sense of the landscape. I liked working with him because I was so independent; he trusted me to figure out what he wanted, and gave me the freedom to give my own thoughts.

I think VERSE is helpful if you're trying to figure out what type of work you're interested in, because the program eases you into what research is like—plus I got the chance to do some coding for a real problem.

### **Binh Nguyen**

*A rising sophomore deciding between neuroscience and molecular biology majors at Pomona College in California, Nguyen worked in the lab of chemistry professor Jonathan Kenny, researching complexation, or how molecules bind together to form larger, more complex molecules.*

I've definitely considered the possibility of going into research as a future career, and this program helped open my eyes to what it might be like to do that. It has been challenging because I'm not familiar with the concepts that are usually taught in organic chemistry or other upper level classes, so at first I had to ask a lot of questions.



Gloria Kitchens

I've learned that in research, you might be really clear about the problem ahead of you at first, but when you actually go ahead and try to solve it, you realize the underlying issues. I really appreciate being able to apply the general concepts I've learned in chemistry and biology classes and seeing all those things come together, and I've enjoyed having a lot of time to explore a very specific topic on my own with the guidance of a faculty member.

Professor Kenney was a first-generation student too, and we've talked a lot about dealing with stuff like imposter syndrome and his own experience having difficulty with classes. I view him now as more of a friend, and it has been really great and a very valuable opportunity having that personal connection with a professor.

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