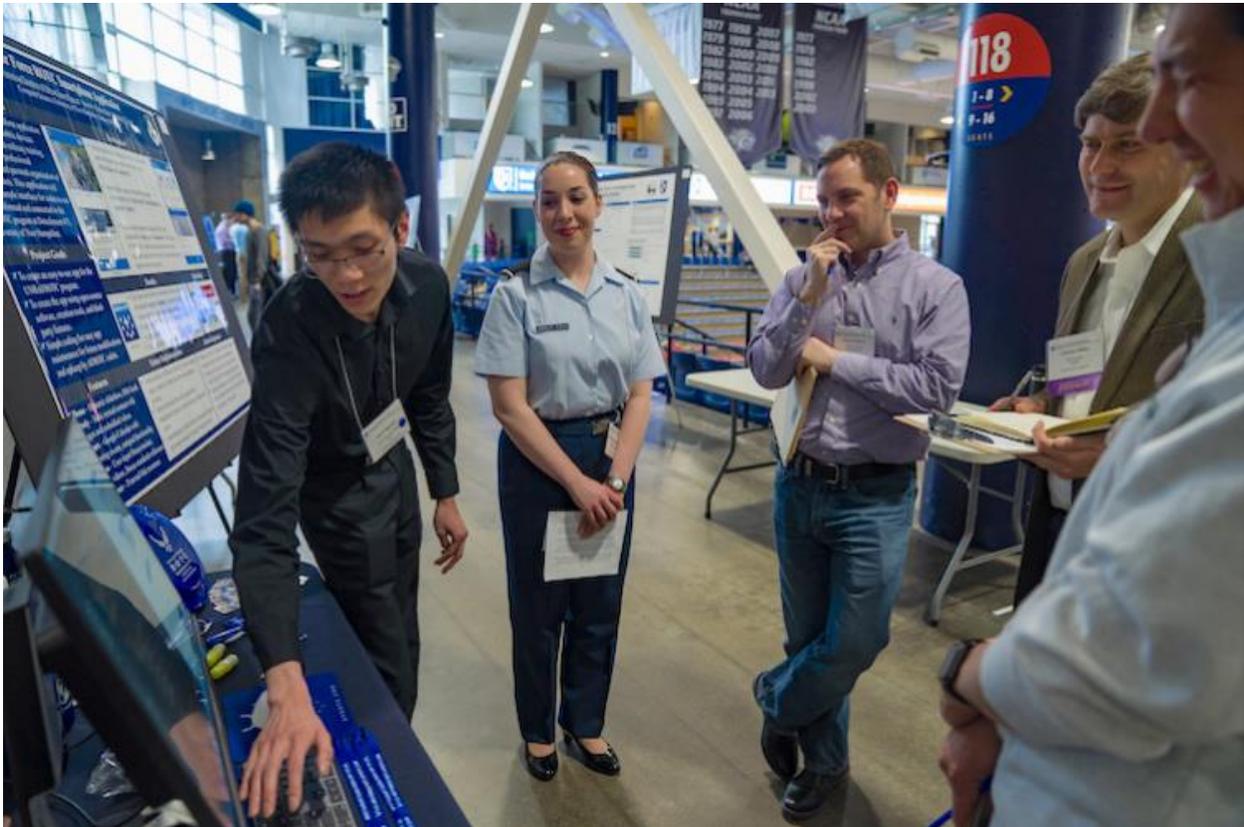


Building the Future

URC project creates ROTC smartphone app

Friday, May 3, 2019

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JASON NGUYEN AND VERONICA CHAMBERS-O'BRYAN EXPLAIN THEIR SMARTPHONE APPLICATION TO ONLOOKERS DURING THIS YEAR'S UNDERGRADUATE RESEARCH CONFERENCE.

Veronica Chambers-O'Bryan '19 knows the amount of paperwork Air Force ROTC cadets are inundated with during officer training. Jason Nguyen '19 knows coding. So, when Chambers-O'Bryan got the idea to develop a smartphone application to make keeping track of all those instructions and rules more manageable, she went to fellow [information technology](#) major Nguyen for help.

The mobile app they built is designed to “aid with military training, physical training, professional development and personal organization” by eliminating the reams of paper that [UNH Air Force ROTC](#) cadets like Chambers-O’Bryan have to commit to memory. Things like how to march, and how and when to wear different uniforms, and something called “warrior knowledge” that includes the mission of the Air Force, its core values and honor code.

Chambers-O’Bryan and Nguyen created the program with the intention of presenting the project at the [Undergraduate Research Conference](#), one of the largest and broadest such research opportunities in the country. (This year, its 20th, saw more than 2,000 students from 96 majors showcasing their research.) Their project won honorable mention in computer science applications.

Chambers-O’Bryan, who goes on active duty in May 2020, knows from personal experience just how much paper there is, and how much studying is required to learn everything the students need to know.

“The first time you develop an app it becomes a process. There are obstacles; you can get stuck.”

“Having an app centralizes all the materials,” Chambers-O’Bryan says. “All the papers, books — it takes all the documents and puts them in a visual phone application that can easily be used as a study guide. And it includes videos.”

It took most of their senior year for Chambers-O’Bryan and Nguyen to build the program; they figured out most of what they needed to know as they went along. Their professors helped as much as they could, but there were limits.

“IT majors build websites. We were building an app,” Nguyen says. “The first time you develop an app it becomes a process. There are obstacles; you can get stuck. Sometimes the way code works is different on a computer than on a phone or a tablet. There can be a disconnect.”

While Nguyen took care of writing the code, Chambers-O’Bryan worked on how the program would look. She also talked with fellow cadets to gauge interest in the app, which was designed specifically for UNH Air Force ROTC students.

The program was developed in three phases. The first involved brainstorming ideas and then creating sketches for possible layouts. Once they had the initial drawings, they switched from a simple layout tool to one that offered better visuals and functions. Next they focused on research, using various development frameworks and tools needed to write and test software.

“The app can be adapted to meet specific wants and needs,” says Nguyen, who, after commencement, will spend four months training with Leap, Fidelity's graduate technology program before going to work for the investment company full time. “We’ll be uploading it to Google Play and the App Store — it will be free — so anyone can download it.”

Adds Chambers-O'Bryan, "We wanted to use open-source software so that someone could go in and easily keep it up after we leave. We're hoping the Air Force will adopt it; we have high-tech drones and yet everything is still on paper. This is the future."

Interested in a career in [information technology](#)? See what you can do.

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