Roland Oruche, a second-year PhD student in computer science has been selected to receive a 2021 National Science Foundation (NSF) Graduate Research Fellowship.

The highly selective Fellowship recognizes and supports outstanding graduate students in NSF-supported STEM disciplines. It includes three years of financial support.

Selection as an NSF Graduate Research Fellow “is a highly significant national accomplishment and places [Oruche] among an elite group of fellows who have gone on to distinguished careers in STEM or STEM education,” NSF Division Director Kim Barrett wrote in a letter announcing his selection.

“MU provides excellent organizational support for students interested in pursuing applications to prestigious fellowships such as the NSF GRFP,” Oruche said. “Rachel Newman, interim director of the Mizzou Fellowships Office, and Dr. Prasad Calyam were critical in helping me with the application. I’m very thankful for their support and mentorship and am very honored to have been selected.”

It’s the second award Oruche has received this year. In January, he received a $10,000 supplemental stipend from the Koerner Family Foundation.

Oruche earned a bachelor’s in information technology at Mizzou Engineering. After graduation, he had planned to enter the workforce, but found a different route thanks to Calyam, an associate professor of electrical engineering and computer science. With Calyam’s encouragement, he applied to Mizzou Engineering’s Research Experience for Undergraduates program in consumer network technologies.
The NSF-funded REU introduces undergraduates to research, giving them opportunities to solve real-world problems. Oruche worked with a team to research virtual reality classroom experiences for students on the autism spectrum. Specifically, they looked into cyber risks within virtual environments.

“Working on those specific issues allowed me to really understand some of the concepts that are the driving forces behind technology and to understand the core concepts and technologies used today,” he said.

Following the REU, Oruche worked with Calyam in the Virtualization Multimedia and Networking (VIMAN) Lab. As an undergraduate in the lab, he researched cloud computing, networking and artificial intelligence.

“It was the positive environment of that lab that allowed me to pursue my graduate studies at Mizzou,” he said.

Oruche now works in the Mizzou CERI Center for Cyber Education, Research and Infrastructure, which Calyam oversees. There, Oruche focuses on machine learning, recommending systems and human-computer interaction.

Ultimately, Oruche hopes to use his IT and computer science education to work in research and development.

“My goal is to utilize my skills to the best extent and pursue cutting-edge research to solve real-world problems,” he said.

Phong Hien Nguyen, who earned a bachelor’s in chemical engineering from Mizzou, was also selected to be an NSF Graduate Research Fellow. Nguyen is now studying at the University of California-Santa Barbara.

Learn more about IT, the REU and computer science programs at Mizzou Engineering.