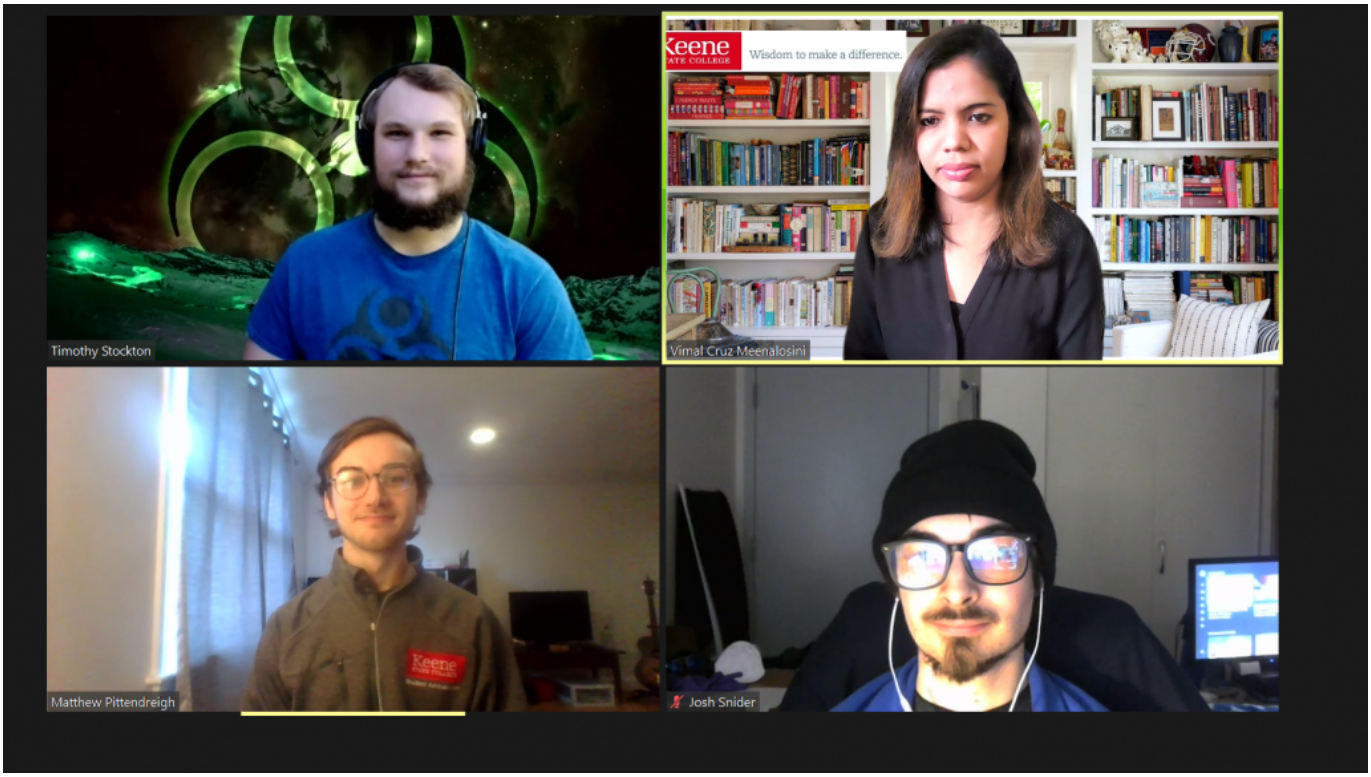
Students Create Owl Assist Chatbot Using Artificial Intelligence

April 16, 2021



Student team with Dr. Meena Vimal Cruz

Two years ago, computer science professor Dr. Meena Vimal Cruz handed her student Matthew Pittendreigh a project: use artificial intelligence (AI) and natural language processing to create a chatbot for the college. “In my teaching,” said Dr. Cruz, “I mentor students and help them get hands-on experience, applying theoretical knowledge to real-world problems. We work on a project basis. A chatbot will act like an automated customer support to help prospective students apply, get connected, and answer important questions about resources and deadlines, any hour of the day or night.”

Matthew, already a veteran of Dr. Cruz’s projects, jumped right in. “It’s a behemoth task,” he said. “You have to give the bot thousands and thousands of examples in order to be able to answer questions well. We wanted the ability not only to answer factual questions, such as the phone number of Admissions, but questions a level deeper, the more dynamic ones. I wanted to do something that would help Keene State for a long time.”

Matthew and Dr. Cruz started meeting daily, joined in 2020 by students Tim Stockton and Josh Snider, both rising seniors. Working together, they learned about web development, creating software systems, and building large databases. They also created workflow models for beginning students, so knowledge can easily be transferred. Entry-level programming students will be able to add data and work on the bot and, in time, take it to the next level.

“The collaborative environment here has really helped our lab,” Matthew noted. “Dr. Cruz backs us up and helps get us funding. You can only learn so much in a classroom – you have to work outside the class too, and that is where collaborative learning comes in.” Josh added, “We teach each other.”

Owl Assist was launched this spring, aimed at prospective and current students. It is not the only college chatbot by any means (most schools outsource it to third-party vendors), but it is one of the few, if not the first, built by undergraduate students. Matthew is graduating with an impressive portfolio, poised to carry on his studies and his work. “Between my computer science and mathematics education from Keene State, I have garnered the knowledge, connections, and confidence to make almost any software idea a reality,” he said.

Tim and Josh, who both came to Keene State as transfer students and will graduate in the coming year, will take over for now, joined this fall by new computer science students. “My student researcher position has vastly improved my computer science comfort level,” Tim said. “While I still have much to learn, the real-world applications are already becoming more apparent.” Dr. Cruz concurs. “Computer science professionals must be life-long learners,” she said. “For an ongoing project like the chatbot, we will be able to continually update it.”

To access Owl Assist:

For IOS devices and Windows phones: download the free Google Assistant app, click on the microphone and say “talk to Owl Assist” or type “talk to Owl assist,” and ask your question about Keene State.

For Android devices and smart phones: touch and hold the Home button and say “talk to Owl Assist” or type “talk to Owl Assist,” and ask your question about Keene State.

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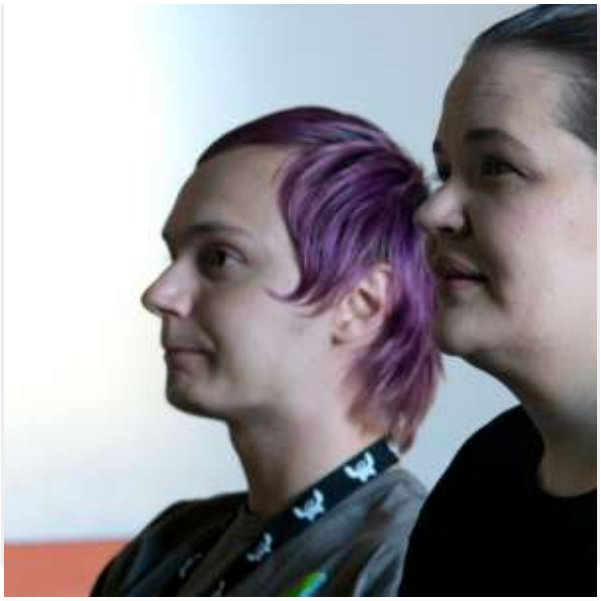

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