

Building an Empire, Leaving a Legacy

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Description of the Problems

The United States is facing a crisis in that there is a disproportionate number of STEM jobs in relation to the number of qualified workers. This discrepancy is notable in all fields of engineering. Even though students may choose to study engineering in college, there is a disconnect between classroom coursework and real-world application.

This project involves establishing a competitive robotics team in which engineering students at UTK can engage in hands-on learning, expanding the footprint of the team by community outreach to younger teams, hosting robotics events on campus that will expose more middle and high school students to the Tickle College of Engineering, and making intentional plans for the sustainability of the team in the coming years.

Importance of the Project

The project is relevant in that it has provided and will continue to provide both hands-on learning opportunities for current college engineering students and significant mentoring and recruitment opportunities for young STEM students in Tennessee.

The Project/The Selected Approach to the Problem

The project is significant in its unique ability to provide a method to fill the gap in qualified STEM workers in the United States by directly recruiting top middle and high school students to the University of Tennessee where they will have the opportunity to practice the skills and concepts they learn in their coursework through the hands-on learning environment of competitive robotics.

What will be achieved

My vision for this project involves a review, evaluation, documentation, and continuation of my four-year endeavor toward establishing a competitive robotics team. Engineering students at UTK can engage in hands-on learning. Expanding the footprint of the team by community outreach to younger teams, hosting robotics events on campus that will expose more middle and high school students to the Tickle College of Engineering and making intentional plans for the sustainability of the team in the coming years.



Final Project Status

- 24 member team meeting in dedicated robotics lab.
- Helped found 23 new middle and high school robotics teams in Tennessee.
- Hosted official VEX event on campus as recruiting resource for Tickle COE.
- 2021 VEXU World Tournament Champion
- 2021 VEXU World Excellence Award
- 2018 VEXU Community Award



- Served as student advisor during my last semester.
- Investigated ways to increase diversity and inclusion.
- Ran elections and trained new team leaders.
- Continued outreach by volunteering at local events, mentoring younger teams, and hosting events on campus.
- Extended CAD, PCB, 3D printing capabilities of our team