

J. Tyler Gragg

TylerGragg.com

SUMMARY

Senior pursuing to advance education in Robotics through graduate degree program. Excels in the design and integration of multiple systems or functionalities including Mechanical, Electrical, and Computer Science. Experience with Object-Oriented Programming, Embedded Systems, and various CAD programs from involvement with robot competition teams, personal projects, and career experiences.

EDUCATION

Pursuing Bachelor of Science in **Mechatronics Engineering (4.00 GPA)** **August 2015 – Present**
Kennesaw State University - Marietta, GA - Anticipated Graduation: **May 2020**

SKILLS

SolidWorks	C++ & Python	OpenCV
Fusion 360	ROS	TensorFlow
Unity 3D & Blender	Arduino Hardware & Arduino IDE	Google Cloud API

RELEVANT PROJECTS

Autonomous Underwater Vehicle Software Lead - Team Project **August 2016 – Present**

- Managed team of six people working simultaneously in autonomous software development.
- Retrained and implemented TensorFlow object detection API to detect competition objects.
- Designed ROS SMACH state machine to transition autonomous system from one task to another.

Remote Control Virtual Reality Robot – Independent Project and Research Paper **December 2019**

- Published research paper in University of Alabama's Early Career Technical Conference.
- Designed modular virtual reality user interface to control mobile robot with PID control.
- Developed Virtual Reality cockpit and command station for wireless RC car control.

Dubhacks Hackathon - Team Project **October 2018**

- Finished in 1st place for Facebook hack, Microsoft hack, and overall “data visualization” track.
- Used Microsoft Azure Cloud services to return machine learning trained data in real time.

Audio Gun - Independent Project **October 2018**

- Designed and manufactured a flashlight-sized device able to break wine glasses with sound.
- Placed top 20 in an online competition hosted by Instructables in the “Audio” category.

WORK EXPERIENCE

GTRI ATAS - Computer Science Co-op **January 2018 – Present**

- Implemented Extended Kalman Filter for use in real-time ground estimation onboard aircraft.
- Aided in adapting autonomy code for aircraft onto underwater vehicles.
- Collaborated with researchers to build new motion model and autopilot for aircraft simulation.
- Designing and planning flight patterns for aircraft to fly in swarm-like formation.

Uniq Technologies - Mechatronics Intern **March 2017 – August 2017**

- Designed, manufactured, and programmed heavy lifting X8 quadcopter.
- Created OpenCV program to locate and track transmission line insulators.
- Integrated PixHawk flight controller with Raspberry Pi to autonomously clean insulators.

HONORS & AWARDS

Graduation as *Honors Scholar* **May 2020**
Southern Polytechnic College of Engineering - *Outstanding Undergraduate Student* **February 2020**