

J. Tyler Gragg

TylerGragg.com

SUMMARY

B.S. in Mechatronics Engineering who 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

Bachelor of Science in **Mechatronics Engineering (4.00 GPA)** **May 2020**
Kennesaw State University - Marietta, GA

SKILLS

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

RELEVANT PROJECTS

AutoPinball - Autonomous Pinball Machine - Team Lead **May 2020**

- Designed, manufactured, and programmed custom pinball machine KSU senior design project.
- Features included automatic detection of flippers and pinball, score tracking, and light control.

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.

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.
- 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

Honors College - *Outstanding Senior Honors Student* **May 2020**

Graduation as *Honors Scholar* **May 2020**

Southern Polytechnic College of Engineering - *Outstanding Undergraduate Student* **February 2020**