

J. Tyler Gragg

TylerGragg.com

EDUCATION

Pursuing Masters of Science in **Computer Science (4.00 GPA)** **December 2021**
Georgia Institute of Technology - Atlanta, GA

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

SKILLS

Git & CMake	C++ & Python	OpenCV
Unity 3D & Blender	Linux OS	ROS
Pytorch & Numpy	TensorFlow Object Detection	Ardupilot

WORK EXPERIENCE

Anduril Maritime - Software Engineer **April 2022– Present**

- Led software efforts and integrated hardware on a major project.
- Collaborated with multiple different engineering firms to complete software goals.

Area-I & Anduril - Computer Science Intern **May 2021 - April 2022**

- Integrated interpolation techniques for data visualization including BSplines & Floater Hormann.
- Reproduced Hybrid A* paper results to fly on autonomous aerial vehicles.
- Designed and implemented terrain following and terrain avoidance maneuvers.

GT IceFin - Graduate Research Assistant **August 2020 - May 2021**

- Built ground-up autonomous stack using features from Ardupilot and ArduSub.
- Implemented ROS based Extended Kalman Filter for navigational pose estimation.

GTRI ATAS - Graduate Research Assistant **January 2018 – January 2021**

- Implemented Extended Kalman Filter for use in real-time ground estimation onboard aircraft.
- Aided in adapting autonomy code for aircraft (UAV) onto underwater vehicles.
- Designing and planning flight patterns for aircraft to fly in swarm-like formation.

RELEVANT PROJECTS

Autonomous Pinball Machine Team Lead - Team Project **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 – May 2020**

- Managed team of six people working simultaneously in autonomous software development.
- Retrained and implemented TensorFlow object detection API to detect competition objects.

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.

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**

PUBLICATIONS

Gragg, T., & McFall, K. (2019). REAL-TIME VIRTUAL REMOTELY OPERATED VEHICLE. *Journal of UAB ECTC*, 18.

Gragg, T., Larson, J., McDermitt, C., Meier, C., Sailor, B., Spencer, L. (2019). Technical Design Report for Charybdis. RoboSub, 22. Retrieved from https://robonation.org/app/uploads/sites/4/2019/10/KSU_RS19_TDR.pdf

NEWS

AUVSI Magazine

<https://issuu.com/auvsi3/docs/unmanned-may-2018-web/42?fr=sNzliMDYxOTA3MQ>

School Newspaper

<http://theksusentinel.com/2018/02/05/honors-student-creates-3-d-printed-robotic-hand/>

Hackster Article

<https://www.hackster.io/news/automated-pinball-machine-scores-big-with-computer-vision-a3a67efa90e5>

Interesting Engineering Article

<https://interestingengineering.com/13-of-the-most-forward-thinking-pioneering-engineering-students-to-watch>

PCBWay Article

https://www.pcbway.com/blog/Activities/AUTOPINBALL_SPRING_2020.html