

# J. Tyler Gragg

[TylerGragg.com](http://TylerGragg.com)

## SUMMARY

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B.S. in Mechatronics Engineering, pursuing M.S. in Computer Science, who excels in the design and integration of multiple systems or functionalities including Mechanical, Electrical, and Computer Science.

## EDUCATION

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Pursuing Masters of Science in **Computer Science (4.00 GPA)** **August 2020 - Present**  
**Georgia Institute of Technology** - Atlanta, GA

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

## SKILLS

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SolidWorks / Fusion 360	C++ & Python	OpenCV
Unity 3D & Blender	Linux OS	ROS
Embedded Systems	TensorFlow Object Detection	Ardupilot

## RELEVANT PROJECTS

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**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.

## WORK EXPERIENCE

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**GT IceFin - Computer Science Researcher** **August 2020 - Present**

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

**GTRI ATAS - Computer Science Researcher** **January 2018 – January 2021**

- 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

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

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

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