

Jayson Tyler Gragg

TylerGragg.com

SUMMARY

Senior pursuing a career in robotic and autonomous systems. Excels in the design and integration of multiple systems or functionalities. Enjoys being able to explain complicated projects in simple terms. Experience with Linux, Arduino boards, C++, C#, Java, Python, Raspberry pi, and SolidWorks from involvement with robot competition teams, personal projects, and career experience.

EDUCATION

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

SKILLS

SolidWorks	Linux	Raspberry Pi
Fusion 360	Arduino Hardware & Arduino IDE	Circuit Maker
3D Printing	OpenCV	Soldering
Unity & Blender	Oculus Rift Development	Google Cloud API

RELEVANT PROJECTS

AuburnHacks Hackathon - Team Project **February 2019**

- Finished in 1st place for Top Teams Overall.
- Created App to monitor location and read out medical data if incapacitated in a hospital.
- Used Google Cloud Platform to locate nearby hospitals, current location, and other data.

Dubhacks Hackathon - Team Project **October 2018**

- Finished in 1st place for Facebook hack, Microsoft hack, and overall “data visualization” track.
- Created a VR space allowing the user to input data to be visualized in a physical space.
- Used Microsoft Azure Cloud services to return machine learning trained data in real time.

Audio Gun - Independent Project **October 2018**

- Designed a flashlight-sized device capable of breaking wine glasses with sound.
- Integrated multiple libraries to record resonant frequency, then reproduce it at a louder volume.
- Designed 3D Printed housing for components with easy access to electronics. (Fusion 360)

HackGSU Hackathon- Team Project **March 2018**

- System to report car accidents to individual phone numbers.
- Used Dragonboard GPS to attain current latitude and longitude and send it to website and text.
- Added vibration sensor to detect when a crash has occurred on vehicle.

XBuild18 Hackathon - Team Project **April 2018**

- Drone system to autonomously detect and report information about large scale disaster events.
- Integrated the Myo Armband to allow control of the drones while using restrictive clothing.
- Integrated FlytBase cloud-based drone simulator and autopilot.
- Trained IBM Watson to identify if people were standing, or lying down on the ground.

Robot Hand - Independent Project **January 2018**

- Built 3D Printed fully moveable and working robot hand.
- Wired glove with flex sensors to re-create hand movements on robotic hand.
- Created open source Arduino library to implement flex sensors.

BattleBot - Independent Project**September 2017**

- Designed a battle bot for Robot Battles competition in Atlanta.
- Interfaced RC transmitter with Arduino Uno to create bidirectional motor movement.
- Designed entire electrical circuit for robot using an H-Bridge motor controller.

Autonomous Underwater Vehicle Team (AUV) - Team Project**August 2016 – Present**

- Designed state machine to transition autonomous system from one task to another.
- Designed electrical system for torpedo launching system.
- Worked with Arduino boards to test functionality of motors.

WORK EXPERIENCE

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

- Aerospace Transportation and Advanced Systems lab of the Georgia Tech Research Institute.
- 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, programmed, and built 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.

Escape the Room Puzzle Design - Software Designer**January 2017 – January 2018**

- Freelance with Practical Low Voltage Solutions tech company.
- Coded Arduino for coke machine puzzle and electric typewriter puzzle.

KSU Chemistry Department - Lab Technician**January 2017 – January 2018**

- Work with LabView program to read input from Omega Temperature controller.
- Created LabView program to control Kepco Power Supply.
- Designing LabView program to heat sample at a steady temperature rate.

INVOLVEMENT AND INTERESTS

TEDx Presenter

April 2016

RES Life - Resident Assistant

August 2016 – Present