

# Colton Maring

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## EDUCATION

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**University of Central Florida**  
*Bachelor of Science in Computer Science*

August 2021 - May 2025  
GPA: 3.74/4.0

## PROJECTS

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### **Motion Simulator Software & Platform** | *Javascript, Arduino, Node, Electron*

- Created an application to control a 2-degrees-of-freedom Arduino motion simulator and view its corresponding telemetry
- Utilized the Node runtime and native modules to parse UDP packets and establish a serial connection to an Arduino-driven PCA9685, enabling servo control for real-time motion simulation
- Designed and tested the motion platform using CAD software and 3D printing

### **RE-RASSOR Rover** | *CAD, Arduino, 3D Printing*

- Modified CAD files to reduce complexity, strengthen components, and optimize for 3D printing
- Authored documentation for educators, covering assembly procedures and 3D printing guidelines
- Currently working to reduce the electronic and computational complexity of the current system, and writing new software to remotely control the rover from any internet-connected device in the world

### **Conversation Starter Generator** | *Java, Android Studio*

- Developed and launched an Android app on the Google Play Store that enhances social interactions through a smart, location-based conversation starter generator
- Integrated the Google Places API with OpenAI's GPT-3.5 API to generate location-relevant conversation starters

### **Voron 0.2** | *Soldering, Crimping, Measuring, Wiring, 3D Modeling & Slicing*

- Assembled a 3D printer from individually sourced parts
- Programmed and tuned the Voron 0.2 to achieve high printing speeds with high resolution

## EXPERIENCE

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### **NCS Learning Lab Assistant**

*Summer 2024*

- Implemented STEM-themed robotics and programming challenges for summer programs, teaching the essentials of coding and Arduino development
- Developed documentation for assembling the RE-RASSOR rover, with a focus on 3D printing and mechanical assembly

### **Undergraduate Research**

*Summer 2024*

- Explored the utility of a human gesture-controlled quadrupled robot assistant
- Leveraged Google's MediaPipe hand landmark detection model alongside Unitree's SDK to command the Go1 wirelessly via hand gestures with low latency

### **KnightHacks Hackathon**

*Fall 2023*

- Led the development of Scale Sense, a web-based musical training tool that utilizes machine learning (ml5.js) and a pre-trained pitch estimation model for real-time note detection
- Secured 3rd place in the overall category out of 100 teams

### **Hackabull Hackathon**

*Spring 2022*

- Worked with a team to develop a website that gathers users' dietary restrictions and preferences and provides nearby restaurant recommendations
- Designed an intuitive UI/UX in React with Bootstrap as well as handled requests and responses to the Google Places API

## TECHNICAL SKILLS

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**Languages:** JavaScript, Python, Java, C, HTML/CSS

**Frameworks and Libraries:** Node, Electron, React, Express, Bootstrap

**Tools:** Docker, Linux, Windows, Git, Apache, Cloud Computing, Android SDK, Microsoft Office, CAD

**Hardware:** Arduino, Raspberry Pi, Home Lab, 3D Printing