Colton Maring

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Education

University of Central Florida August 2021 - May 2025
Bachelor of Science in Computer Science GPA: 3.68/4.0

Personal Projects

Motion Simulator Software & Platform | *Node.js, Electron, Johnny-Five*
- Created an application to control a 2-degrees-of-freedom Arduino motion simulator and view its corresponding telemetry
- Utilized the Node.js 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
- Leveraged the Electron framework to display telemetry data and allow for user input

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

Stencil Creator | *JavaScript, Three.js, HTML, CSS*
- Developed a responsive website to create text stencils specified by user input, utilizing the Three.js library to render the stencil in real-time
- Implemented an export function for effortless use in 3D printing and CNC applications

Course Projects

Contact Manager | *Javascript, PHP, MySQL*
- Collaborated as a team to develop a web-based contact manager application, allowing users to register or log in and manage their contacts through CRUD operations
- Engaged in front-end development, writing client-side scripts and employing Bootstrap for optimal UI/UX
- Utilized Docker containers for streamlined development and easy deployment in the cloud

Personnel Management System | *Java*
- Utilized object oriented programming concepts to develop a program that enables users to store individual profiles while generating an invoice for record-keeping
- Designed a menu-driven interface to easily interact with the Personnel Management System's functions

War Card Game | *C*
- Implemented the game's mechanics, enabling two players to engage in a turn-based battle
- Integrated error handling, dynamic memory allocation, input validation, and tested for memory errors using Valgrind to ensure the game runs without crashes

Extracurricular

KnightHacks Hackathon *Fall 2023*
- Led the development of Scale Sense, a web-based musical training tool that utilizes ml5.js and a pre-trained CREPE model for real-time pitch 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

Languages: Java, JavaScript, HTML/CSS, C, Python
Frameworks and Libraries: Node.js, Electron, Swing, React
Tools: Git, Apache, Gradle, Vite, Linux, Windows, Valgrind, Cloud Computing, Android Studio, MS Office products
Hardware: Arduino, Raspberry Pi, Home Lab, 3D Printing