Matthew Carvajal

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Education

Bachelor of Science in Computer Engineering	**GPA: 3.1**
University of Central Florida	**Graduating: December 2025**

Relevant Coursework: Object Oriented Programming, Computer Graphics, Computer Science I, Computer Science II, Embedded Systems, Computer Architecture, Programming Languages I, Processes of Object Oriented Software

Skills

Programming Languages: C, Java, Swift, Python, HTML, CSS, SQL, C++, PHP
Software Tools and Frameworks: SwiftUI, AWS Lightsail, AWS Console, Git/GitHub, MongoDB, React, Visual Studio Code, Xcode, OpenGL, Jupyter Notebook, SwaggerHub API, Postman, MATLAB, Microsoft Office, Unreal Engine 5, OpenCV, TensorFlow, CoreBluetooth
Operating Systems: Windows, Linux Ubuntu, macOS
Languages: English, Spanish

Projects

Safe Sight: Driver Safety Device and iOS App   **January 2025 – Present**
- Currently designing an AI-powered driver assistance system using **OpenCV** and **TensorFlow** that uses camera input to detect traffic signals and assess driver awareness in real time.
- Developing an iOS companion app using **Swift** and **SwiftUI** with **CoreBluetooth** integration to establish a seamless connection between the iPhone and an ESP32-based embedded system, enabling real-time data monitoring and alert delivery via a buzzer.
- Prototyping a real-time embedded system using **ESP32** and **Raspberry Pi**, including a Bluetooth-enabled data pipeline that captures driver distraction images and transmits them to an iOS app to highlight user inattentiveness.

iOS App: War Card Game   **October 2024**
- Developed an independent card game app using **Swift** and **SwiftUI** to recreate the classic game of War, improving **iOS development** and programming skills.
- Designed and implemented a **user-friendly interface** that allows players to easily deal cards and track scores, providing an entertaining and seamless user experience.
- Utilized **randomization algorithms** to ensure fair and unpredictable card dealing, constantly keeping the user engaged.

Custom PCB Design: Range Finder   **August 2024 – December 2024**
- Engineered an embedded ultrasonic rangefinder system using a custom-designed PCB and **MSP430** microcontroller, achieving accurate real-time distance measurements.
- Designed and laid out all circuit schematics in **Autodesk EAGLE**, incorporating dual custom voltage regulators for precise 3.3V and 5V operation.
- Developed and tested a **C** program for the MSP430 to interface with ultrasonic sensors and handle timing-critical signal processing.

Website: Contact Manager   **August 2024 – October 2024**
- Collaborated with a team of **5** to design an online contact manager using Amazon **AWS Lightsail** and **SwaggerHub API**.
- Developed a high-performance API and back-end using **PHP**, significantly enhancing website speed and responsiveness.
- Created a user-friendly application that implemented the **CRUD** (create, read, update, and delete) operations that allowed each user to have their own contacts in an **SQL** database.

Professional Experience

Best Buy: *Orlando FL*
Geek Squad Consultant Agent   **May 2024 – Present**
- Provided expert technical support to **50+ clients** per week by resolving hardware and software issues efficiently, resulting in a **98%** customer satisfaction rate.
- Conducted in-depth diagnostics and repairs using **Apple GSX** on a variety of electronic devices, including computers, smartphones, and other personal electronics, significantly boosting diagnostic accuracy.
- Utilized **BIOS flash utilities**, **disk cloning software** and **malware removal tools** for **Windows, macOS, Linux** and **mobile** devices.

Microsoft Copilot Specialist   **May 2024 – August 2024**
- Successfully represented Geek Squad during a special event, focusing on selling Microsoft Copilot PCs, boosting back-to-school computer sales by over **50%**.
- Achieved a sales target of **80 units** of Microsoft Copilot PCs within a span of **4 months**, contributing to a **50%** increase in overall sales.
- Effectively attached Geek Squad Services to **70%** of Microsoft Copilot PC sales, enhancing overall customer satisfaction and service revenue.

Professional Computer Sales Associate   **May 2023 – May 2024**
- Simplified complex technical information, making it accessible and understandable for customers, leading to **90%** higher customer satisfaction and confidence in their purchases.
- Achieved a basket attachment goal of **$120** per sale, boosting overall store and team revenue.
- Engaged with **70+** customers daily, building strong relationships and ensuring a positive shopping experience.

Extracurricular Activities

Society of Hispanic Professional Engineers UCF: *Member*   **August 2024 – Present**
- Collaborated to support professional growth and technical development within the engineering field.
- Engaged in team-based workshops and projects to strengthen communication, networking, and technical collaboration skills.