MICHAEL ORSCHELN

https://www.linkedin.com/in/michaelorscheln/ | www.michaelorscheln.com | https://github.com/moorscheln

EDUCATION

Bachelor of Science (BS) Computer Engineering
The University of Alabama | Tuscaloosa, AL
Minors: Mathematics, Computer Science, Spanish
Coursework: Computer Architecture, Data Structures & Algorithms, Microcomputers, Linear Algebra, Signals & Systems

EXPERIENCE

Software Developer | RLS Solutions | Remote — Jul 2024 - Present

- Automate migration process of 650+ products and content management system (CMS) data via Python, GraphQL, and Shopify REST API to eliminate 120+ hours of manual data entry
- Develop web, iOS and Android applications in React JS/Native, leveraging a Git workflow, focusing on developing reusable, modular components and resolving bugs across the codebase to maintain consistent performance

Digital Forensic Intern | Repario | Remote — May 2023 - Aug 2023

- Conducted forensic investigations on laptops, mobile devices and cloud environments by leveraging tools, such as Cellebrite, and write custom scripts to reveal hidden data overlooked by standard forensic solutions

Project Management Intern | SALTO Systems | Oiartzun, Gipuzkoa, Spain — Jun 2022 - Aug 2022

- Designed Apple, Inc. platform integration onboarding courses delivered to 64 global business units reducing onboard load by 45% thus driving sales performance and growth into new markets

Associate Intern | Charter Capital Management, Inc. | Boston, MA — May 2021 - Jun 2021

- Developed responsive website with analytical tools resulting in a 152% increase in organic search traffic
- Evaluated real estate investment projects applying comparative and cash flow analysis supporting 10 acquisitions with total valuation of $233 million

PROJECTS

Open-Source Contributor | Flipper Zero Firmware — Feb 2025 - Present

- Restored open-source custom Flipper Zero firmware functionality through debugging firmware APIs to adjust data types and callbacks which has led to improved runtime stability.
- Refined critical collision-detection routines by optimizing bit-level operations and standardizing numeric literal usage to reduce overhead therefore enabling more efficient compilation and accurate runtime calculations

Cache Memory Simulator | Embedded Systems — Apr 2024

- Engineered a STM32 cache memory simulator utilizing DMA for improved UART serial data processing that handles larger data packets and performance metrics (hit rate, tag) to identify bottlenecks in configurations

Localization Subsystem Lead | IEEE SoutheastCon Hardware Competition — Aug 2023 - Mar 2024

- Engineered autonomous robot, alongside 4 team members, to complete complex tasks to send supplies to space
- Integrated localization subsystem in ROS through Arduino microcontroller and processed sensor data with a Kalman filter, a mathematical algorithm, for data accuracy within 1 Euler angle for 6 degrees of freedom

Custom Hardware Snake Game | Digital Systems Design — Aug 2023 - Dec 2023

- Implemented custom hardware logic using Verilog in Xilinx Vivado to make a snake game on a Basys3 FPGA board with a VGA interface, simulating real-time gameplay mechanics

SKILLS

Software: C++, C, Assembly (x86, ARM), Java, Python, JavaScript, TypeScript, HTML, CSS, MATLAB, SQL
DevOps: Git, Scripting & Automation (Bash, Zsh, Python), Docker, Networking, Agile, Jira
Low-Level: Communication Protocols (SPI, I2C, UART, Ethernet), FreeRTOS, Platforms (FPGA, STM32, Arduino, ESP32, Flipper Zero), HDL (Verilog, VHDL), Interrupt Handling (ISRs), Memory Management, Debugging Tools
WebDev: React, React Native, Chakra-UI, NextJS, TailwindCSS
OS: MacOS, iOS, Windows, Linux, Unix, Kali Linux, Robotic Operating System (ROS)
Languages: English (Native), Spanish (Professional)