Israel Escobar-Camacho

@ iescobar@alumni.cmu.edu | in linkedin.com/israel-e-c | ⚲ Chicago, IL, US | Spanish & English
Security Clearance Level: Secret

EDUCATION

Carnegie Mellon University   Pittsburgh, PA
B.S in Electrical & Computer Engineering

Relevant Coursework: Computer Systems and Hardware-software interfaces, Introduction to Computer Systems
Introduction to Embedded Systems, Functional Programming,
Introduction to Computer Security, Principals of Imperative Computation

SKILLS

Languages: C/C++, Bash, Python, Lua, Java, Matplotlib, RISC-V ISA, x86-64 ISA, ARM32/Thumb ISA, ARM64

Technologies: Git/Github, Confluence, Linux, Proxmox VE, Windows Vista/8.1/10/11, MacOS X, UNIX, Software
Defined Radios, Real-Time Embedded Systems, GDB, JTAG, TCP/UDP, Ghidra, Cryptographic tools, Docker

WORK EXPERIENCE

Motorola Solutions Inc.   Schaumburg, IL
Embedded Software Engineer II   *July 2024 – Current*
- Applied reverse engineering tactics, self-guided research, and critical thinking to provide customer-focused solutions
- Utilized Radio Frequency traffic, JTAG, and company standard tools to debug embedded systems
- Depended on AES, HMAC-SHA256, and ARC4 knowledge to solve niche problems
- Documented future improvements, solutions, and self-guided findings to support team efforts

Intel   Hillsboro, OR
Pre-silicon IP Validation Intern   *May 2023 – August 2023*
- Developed and refactored dynamic Python scripts for new infrastructures to support my team efforts
- Self-taught architectural and design knowledge for applying my skills throughout advancing current validation practices

Carnegie Mellon University   Pittsburgh, PA
Teacher Assistant for Principals of Imperative Computation   *May 2022 – June 2022*
- Supported collaborative learning during lab and instruct recitations varying from 4 to 15 students
- Taught topics ranging from data structures, correctness in Objective C, to big-O time efficiency
- Held office hours to support students 1-on-1, including review sessions for larger groups

RESEARCH EXPERIENCE

Carengie Mellon Univ. Department of Mechanical Engineering   Pittsburgh, PA
Undergraduate Researcher   *September 2023 – December 2023*
- Troubleshooted C-based firmware for flashing a STM32 processor on a Custom PCB design
- Developed communication protocols with UART for our chemical sensor EmStat Pico Module

PROJECTS

Real-Time Kernel
- Developed a multi-threaded Real Time Operating System for a STM32 processor with enforced fixed priority scheduler
- Utilized GDB to step through out Thumb instructions for my Objective C code and trace assembly code
- Used MMIO to build upon the UART and I2C Drivers for communication between arduino, LEDs, and other electronics

Homelab Server
- Developing a 32TB homelab server and NAS to serve varying applications to a multitude of people
- Utilized Network solutions such as Wireguard, Traefik, and Authelia to ensure secure connections
- 3D Printing server rack accessories (Modifying STL and CAD designs) for repurposed laptop, Hard Disk Drives, Network Switches, Router, and Access Points
- Heavily utilizing Open Source Solutions and documentation to self teach and apply new found skills