JERRETT LONGWORTH

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SUMMARY

Seeking positions related to software engineering, low-level systems (e.g. firmware, drivers, and operating systems), server/database management, and/or sound engineering.

EDUCATION

Computer Science M.S. – University of Central Florida, Orlando, FL EXPECTED GRADUATION: MAY 2024

Curriculum focus in computer architecture, including trusted execution environments and parallel computing.

Computer Science B.S. – University of Central Florida, Orlando, FL

Graduating honors: Top Honor Graduate, Summa Cum Laude

SKILLS & EXPERIENCE

Languages: ANSI C, Rust, Python 3, Javascript, Markdown, Java, HTML, CSS, LaTeX, MIPS Assembly, C#

Technologies: Git, GitHub (Actions, Projects, Pages), Android framework, .NET framework, Linux, bash, OpenSSH, Ansible Automation Platform, sed, grep, awk, WebSockets, virtual machines, Certbot, Nginx

Programs: Android Studio, IntelliJ, VS Code, Trello, Microsoft Excel, Vim, Adobe Premiere Pro

Soft Skills: Agile, documentation writing, time management, team communication, self-motivated

Previously worked in live-venue sound engineering with teams of 5-15 for events of 50-100 attendees.

EMPLOYMENT EXPERIENCE

Linux Systems Administrator Intern — Leidos REMOTE · **MAY 2023 - PRESENT**

- Create playbook scripts using Ansible and Python to increase server deployment efficiency and error handling.
- Utilize the Agile framework to assign tasks to team members and track workload progress.

Teaching Assistant — University of Central Florida ORLANDO, FL · **AUG. 2020 - PRESENT**

- Manage instruction of the course's main projects, including designing the project specifications to adequate difficulty.
- Conduct code reviews using a critical attention to detail; focusing on Introduction to C and Computer Organization.

SOFTWARE PROJECTS

Simple Web Interface for MIPS *(Senior Design Project)* **SEPTEMBER 2022 - APRIL 2023**

- Awarded "Best in Computer Science" at the UCF CECS Senior Design Showcase in Spring 2023.
- In-browser interface to write, assemble, and visualize MIPS64 instructions (in Rust and Javascript/Yew framework).
- Co-developed the MIPS core with support for 60+ instructions, encompassing 64-bit and floating-point instructions.
- Utilized linting and unit tests within CI/CD pipelines to ensure code quality and accuracy.

CPU Branch Prediction Simulator *(Course Project for Advanced Computer Architecture)* **NOVEMBER 2022**

- Simulator written in C that compares the miss rates of various branch predictors, including Smith N-bit, Gshare, bimodal, and hybrid. Can utilize traces with over 2 million loads and stores.

Supplementary Computer Science Materials **AUGUST 2020 - APRIL 2022**

- Started and developed 30+ pages on topics in C such as function scope and DMA using Markdown.
- Deployed in 5+ sections of 500+ total students at UCF with the backing of course instructors.
- Employed continuous integration with GitHub Actions and bash to build into HTML and deploy in <5 minutes.

Additional Selected Projects:

- Linux VPS hosted on Linode for FreshRSS and Searx using Nginx, with Certbot for SSL. **FEBRUARY 2021 - PRESENT**
- CPU cache and memory hierarchy simulator for various replacement policies (in C). **OCTOBER 2022**
- Social bookmark management service using the .NET Framework and Razor Pages (in C#). **SPRING 2021**

EXTRACURRICULAR & COMMUNITY ACTIVITY

Wiki Knights — University of Central Florida — *President* **FEBRUARY 2020 - MAY 2023**

- As president, organized and maintained contact between Wiki Knights, Student Government, the Center for Distributed Learning (CDL), and UCF faculty/staff to promote open educational resources.
- Authored a Student Government resolution about open education that passed unanimously on the UCF Senate floor.