JUNWOO JUNG

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PROFESSIONAL SUMMARY

Detail-oriented Software Engineer with dual degrees in Computer Science and Electrical Engineering from Cornell University. Experienced in embedded systems, processor architecture, and full-stack development. Skilled in Go, Python, JavaScript (React), C/C++, and Verilog. Passionate about building scalable systems and improving user experiences in collaborative environments.

TECHNICAL SKILLS

- **Programming Languages:** Python, C, C++, Verilog, MATLAB, Bash, Perl, Java, Assembly, JavaScript, React
- **Development Practices:** Agile Methodology, Full-Stack Development
- **Testing & CI/CD**: Unit Testing, Integration Testing, Continuous Integration, Automated Deployment
- **Development Tools**: Git, Perforce, Jenkins, Docker

PROFESSIONAL EXPERIENCE

Instrumentation and Control Software Engineer
Westinghouse Electric Company LLC., PA, USA, Feb. 2024 - Present

- Develop and test software components for the Advanced Logic System (ALS) v2 Platform, supporting eVinci Microreactor systems
- Focus primarily on testing ALSv2 FPGA designs in a testbench environment, ensuring the functionality and performance of the FPGA components

PROJECTS

Interactive Restaurant Website
Independent Project | 2024 - Present

- Designing and developing a full-stack restaurant website using React for frontend, integrating customizable menus, online ordering, payment systems, and real-time notifications
- Using Git for version control and participating in agile development cycles
- Implementing agile development cycles and using Git for source code management

Multi-Core RISC-V System Development
Cornell University | Fall 2022

- Led a team to design and implement a multicore system with custom multipliers, processors, memory, a ring network, a hazard-handling five-stage processor, and a write-back, write-allocate, two-way set associative cache

Autonomous Treasure-Hunting Robot System
Cornell University | Fall 2021

- Designed and implemented an autonomous robot capable of maze exploration, obstacle avoidance, and treasure detection using Arduino microcontrollers and C++
- Engineered sensor integration system combining ultrasonic sensors for navigation and phototransistors for IR treasure detection
- Created wireless communication protocol enabling real-time data transmission between robot and base station via RF modules

FPGA-Based Heart Rate Monitor
Cornell University **|** Fall 2020

- Developed a custom heart rate monitor simulator using an FPGA board and Verilog
- Incorporated a combinational ALU, branching, and halting logic into the microprocessor design

EDUCATION

Cornell University, Ithaca, NY

- **Bachelor of Science in Computer Science**, May 2023
- **Bachelor of Science in Electrical and Computer Engineering**, May 2023

Relevant Coursework:

- Intro to Microelectronics
- Digital Logic and Computer Organization
- Computer Architecture
- Embedded Systems
- Intro to Computer Vision
- Operating Systems
- Object-Oriented Programming & Data Structure
- Intro to Analysis of Algorithms