Evan Ruttenberg

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ABOUT

Computer Engineer with experience in hardware design and embedded systems development. Seeking full-time employment starting fall 2024.

EXPERIENCE

Pacific Northwest National Laboratory Remote – Buffalo, NY July – September 2021

Worked on establishing a pipeline for compiling Python code into Verilog using the MLIR project, IREE, and Tensorflow.

Annapolis Microsystems Annapolis, MD January – May 2022

Expanded coverage of digital logic synthesis and simulation regression testing system. Triaged timing failures in large HDL projects.

Pacific Northwest National Laboratory Remote – Buffalo, NY May – August 2022, 2023

Extended the COMET compiler, focusing on end-to-end compilation from a DSL through execution on heterogeneous compute including FPGA, GPU, and CPU.

SKILLS

Programming Languages: Python, VHDL, Verilog, C, C++
Tools: Linux**,** Quartus, ModelSim, Autodesk Inventor, Xilinx Vivado, Git
Hardware: Oscilloscope, Digital Multimeter, Waveform Generator, Breadboard circuits

PROJECTS

- **Digital System Design II Lab**: Designed and verified a MIPS processor in VHDL using Xilinx Vivado. Independently implemented jump/branch instructions and some exception handling.
- **Open-Source Contributions**: Contributed Java code and Android UI XML to the open-source MTG Familiar Android app. Functionality was added to allow parsing Magic: The Gathering cards using regex. Full properties for the cards were retrieved from a SQL database and used to display metrics.
- **Senior Design**: Working on an autonomous chess board that can move pieces without user interaction. Uses an electromagnet on a gantry for movement and RFID for piece identification. Controlled by a Raspberry Pi running Stockfish.

EDUCATION

ROCHESTER INSTITUTE OF TECHNOLOGY, Rochester, NY
Bachelor/Master of Science in Computer Engineering, May 2024
GPA: 3.43/4.00
Awards: Dean's List Fall 2019 and 2020; RIT Founder's Merit Scholarship; 2019 National Merit Scholarship semi-finalist; AP + PLTW Student Achievement in Engineering

INTERESTS

- Magic: The Gathering
- 3D Printing