Roy Mor

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OBJECTIVE

Senior Eachelors/Integrated Masters ECE Student currently benchmarking Gem5 and starting architectural design research seeking a position in Computer Architecture Design or Verification

EDUCATION

The University of Texas at Austin   Austin, TX
B.S./M.S. Electrical and Computer Engineering   *May 2025/2026*

- Overall GPA: 3.8
- Relevant Coursework: Computer Architecture, ML/HW Codesign, Compilers, Digital Logic Design, Embedded Systems, Software Design II, Linear Algebra, Algorithms

PROJECTS

5-Stage Pipelined Processor | *C*   Dec 2023

- Implemented a 5-stage pipelined version of the LC-3b processor, simulated in C, capable of performing all LC3 assembly operations

COOL Compiler | *C++, LLVM*   March 2024

- Wrote a compiler with the LLVM Framework for minimal, object-oriented language: COOL
- Implemented intermediate representation backedge and loop detection, as well as Loop Invariant Code Motion optimization

RTL Stopwatch for FPGA | *Verilog*   Dec 2022

- Developed a programmable 4-digit stopwatch in Verilog and Vivado for an FPGA board

Solar Array Simulator | *Python, C, QML, Angular*   September 2022 – Present

- Created a QML frontend that graphed incoming data from a characterizing PCB in real time
- Developed serial communications between the Simulator and Curve Tracer PCB for custom testing configurations
- Integrated characterization data for multiple cells with a clustering algorithm that determined and displayed matching cells

EXPERIENCE

Software Engineering Intern   May 2024 – Aug 2024
Amdocs   *Plano, TX*

- Developed a Retrieval Augmented Generation chatbot to improve employee workflow and provide rapid responses regarding proprietary products
- Maintained a Milvus VectorDB to store embeddings of ingested documents and a PostgreSQL DB containing chat histories

Power Generation Member/Lead   August 2021/2023 – Present/July 2024
Longhorn Racing Solar   *Austin, TX*

- Organized a 14-person team to manufacture solar panels, create embedded devices for power electronics and telemetry, and write simulators for photovoltaic performance
- Communicated with members to hit intra- and inter-system deadlines while maintaining safety and efficiency standards
- Developed a new solar simulator to improve accessibility and utility for photovoltaic characterization and assembly
- Characterized and validated power electronics hardware for a boost converter/Maximum Power Point Tracker
- Soldered and laminated solar cells into complete modules

Teaching Assistant for Software Design II   August 2023 – May 2024
UT Austin   *Austin, TX*

- Provided office hours and recitations for students, teaching concepts such as object-oriented design, inheritance, and polymorphism

Technical Skills

Languages: C/C++, Java, Python, Verilog, SQL (Postgres), JavaScript, QML
Frameworks: LLVM, Flask, Angular
Developer Tools: Git, Docker, VS Code, Microsoft Azure Suite, Vivado, Keil, PostgreSQL, Milvus, Mbed Studio