

Triston J Babers

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SUMMARY

Excels at working on complex systems with skills honed through developing many diverse applications.
Strives methodically for efficient and maintainable software solutions that eliminate technical debt

EDUCATION

University of California San Diego, La Jolla, CA
B.S., Computer Engineering

- GPA: 3.73

September 2020 – June 2024

TECHNICAL SKILLS

Languages: C, C++, Cuda, SystemVerilog, HTML5, Javascript, CSS, SQL, Python, Java, Bash
Tools: SSH, GDB, Docker, Junit, Jest, Valgrind, ModelSim, Intel Quartus, CI/CD, Node.js

PROJECTS

Relational SQL Database

- Created a relational SQL database in C++ capable of creating new databases, tables, schemas, and rows; as well as selecting, updating, and joining existing rows within the database.
- Developed a flexible system that maximizes code reuse, and allows for different ways of viewing the output displayed by a command in adherence to the MVC design pattern.

Custom Pipelined Processor

- Designed a pipelined RISC processor in System Verilog that executes a custom ISA with instructions constrained to being 11 bits wide.
- Capable of running programs written in the custom programming language, after they have been assembled by an assembler written in Python.

FPGA Converter

github.com/TristonBabers/Floating-Point-Converter

- Designed a display and converter of an IEEE-754 floating-point number into standard base 10 decimal representation in SystemVerilog
 - Enabled flexible functionality for the 7-segment display to change the precision of how many digits are displayed after the decimal point.
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EXTRACURRICULAR ACTIVITIES

Student Cluster Competition 23

- Competed as a member of the UCSD Travel Team which achieved 3rd place overall.
 - Optimized High-Performance Linpack for a multi-node, multi-GPU supercomputing cluster with 3 nodes and 9 AMD Instinct 200 GPUs.
 - Diagnosed and solved problems with the supercomputer in order to achieve efficient runtimes.
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