Kian Sean Chakamian

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Education

Georgia Institute of Technology | Atlanta, GA Expected Graduation: May 2026
Bachelor of Science in Computer Engineering, GPA 4.00

Skills

Hardware: RISC-V CPU Architecture, DFT, CMOS, Digital System Design, Stack/Heap Memory Management, CDMA, Oscilloscopes
Programming: Verilog, VHDL, Java, C, Python, Assembly (RISC-V, MIPS, SCOMP), TCL
Software: Linux, GIT, Quartus Prime, Vivado, KiCAD

Experience

Qualcomm | San Diego, CA *May 2024 – August 2024*
Hardware Engineering Intern: Design for Testability Team
Qualcomm's DFT team focuses on adding extra components to SoCs to enhance testability and ensure functionality after fabrication

- Created automation tools that located hardware testing components within large SoC designs and reported relevant information to Excel sheets, enabling other DFT team members to repair design flaws and easily make changes to the SoC
- Implemented the automation of certain frequent and tedious debugging processes, allowing Qualcomm to spend their time working on different, more dynamic tasks

Agile Communication Architectures Research Team | Atlanta, GA *January 2024 – May 2024*
Student Researcher: Hardware Subteam
This research team's goal is to use machine learning to enable indoor localization of clients using a single Wi-Fi access point

- Extrapolated phase of the of 0^{th} subcarrier based on information from the rest of an OFDM channel, allowing other hardware subteam team members to pull information from the channel

Esporter | San Diego, CA *July 2021 – August 2021*
Computer Science Intern
Esporter provides a complete coaching and competition experience to amateur gamers.

- Created API to collect participant in-game level from a variety of game developers, enabling Esporter to create "skill-matched" events

CoastalHacks | Del Mar, CA *June 2021 – September 2021*
Founder
CoastalHacks is a virtual student-run hackathon open to developers all over the world.

- Lead a team of 7 students in organizing and promoting a large-scale hackathon
- Individual tasks included coordinating event logistics, defining the identity of the event, developing the website, contacting sponsors, and delegating tasks to the rest of the team
- Efforts led to $40,000+ in prizes, 406 participants, 9 sponsors, 3 workshops, and a diverse panel of judges

Projects

RISC-V CPU Design Implementation *January 2023 – June 2023*
Team Leader and Researcher
As a team of 3, created a Verilog implementation of a RISC-V CPU architecture and wrote assembly code to compute a Sine value using a Maclaurin series approximation in order to verify implementation.

- Created various components, such as ALU, regfile, partial load, and partial store, as well as lead effort to combine all components into their high-level position
- Created entirety of assembly code to prove CPU functionality with a Sine value approximation program on an FPGA board
- Individually received IEEE Solid State Circuits Society award and scholarship for my personal work on project

Relevant Coursework

Programming HW/SW Systems (Current Undergraduate Teaching Assistant): Procedural Abstraction, Data Abstraction, Heap Memory Management, Stack Memory Management, Data Alignment, MIPS Assembly Programming, Garbage Collection, Compilation
Data Structures & Algorithms: Lists, Stack, Queues, BST, Heaps, HashMaps, AVLs, 2-4 Trees, Sorting, Searching, Graph Algorithms
Digital Design Lab: Rapid Prototyping, Oscilloscopes, State Machines, SCOMP, Peripheral Design, VHDL, FPGAs