Vincent Huang

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EDUCATION

Georgia Institute of Technology Expected December 2022
Bachelor of Science in Computer Science (Computing Systems, Networking) 4.0 GPA
Bachelor of Science in Mathematics (Discrete Math)

WORK EXPERIENCE

Amazon June 2021 - August 2021
Software Development Engineer Intern: Seller Mobile Application Team
- Implemented text selection and copying features end-to-end within the **Android** Amazon Sellers mobile app.
- Verified functionality through **Mockito** unit tests, with over 90% code coverage.
- Streamlined development by adding kotlin linting and standardized hundreds of lines of code.

Georgia Tech Research Institute Jan 2020 - October 2020
Software Developer Intern: CIPHER Secure Information Systems Division
- Developed a secure email application with **TypeScript** and **Java**, with **Jasmine** and **Spock** unit tests.
- Refactored the preferences component to **Angular** for improved readability and performance.

Georgia Tech College of Computing
Undergraduate Teaching Assistant: CS 3510 Algorithm Design and Analysis May 2020 - Jul 2020
Undergraduate Teaching Assistant: CS 2340 Objects and Design Aug 2019 - Dec 2019

RESEARCH and PROJECTS

Spatter: Benchmark for Sparse Memory Accesses Aug 2020 - Present
Dr. Jeff Young and Patrick Lavin (HPC Garage Lab)
- Modeled irregular data access patterns over varying hardware accelerators and kernel platforms in **C**.
- Identified Scatter/Gather patterns using **Dynamorio** instruction simulation.

EMADE: Automated Algorithm Design Aug 2020 - Present
Dr. Jason Zutty and Dr. Greg Rohling (Modularity Subteam)
- Applied genetic programming with **DEAP** to design and optimize hybrid algorithms in **Python**.
- Identified Adaptive Representation through Learning candidates to preserve useful aspects of individuals.

Blizzard on Infiniband March 2021 - May 2021
Dr. Ada Gavrilovska and Daniel Zahka
- Developed a **C++** framework that creates persistence and fault tolerance without traditional overheads
  by leveraging log replication via Raft and persistent memory devices.
- Ported Raft's networking stack from TCP/IP to Inifibiband and improved performance by over 80%.

Travel and Intersection Raytracing Engine May 2021
Dr. Hyesoon Kim and Blaise Tine
- Implemented T&I engine in **verilog** and injected into the nanoRT codebase via Verilator for comparison.

SRAM I/O Peripheral Mar 2020 - Apr 2020
- Led team of 4 students in designing I/O device peripheral interface in **VHDL** for the Altera DE2 board.
- Achieved speedup of 447% for SRAM read and write while complying with chip timing requirements

TECHNICAL SKILLS and COURSEWORK

Languages and Technologies: Java, C, Cpp, Python, JavaScript/TypeScript, HTML, CSS, verilog, VHDL, Git, gdb, LaTeX, Android SDK, Angular, Xilinx toolchain, Unix (Ubuntu, RHEL), Windows, MacOS

Coursework and Concepts: Object Oriented Programming, Data Structures, Operating Systems, Algorithms, Machine Learning, Computer Architecture, Networking, Linear Programming, Complex Analysis, Agile, CI/CD