Brian Shen

San Jose, CA, 95129 | brianshen03@gmail.com | 408-206-1891

EDUCATION

University of Chicago | Chicago, IL — September 2025 - December 2026
Masters of Science: Computer Science
- Specialization: High Performance Computing

University of Wisconsin-Madison | Madison, WI
Bachelor of Science: Computer Science — September 2021 - May 2025
- Relevant Coursework: Data Structures & Algorithms, Linear Algebra, Statistics for Engineers, Artificial Neural Networks and Deep Learning, Operating Systems, Building User Interfaces, Computer Networks, Virtual Reality
- Activities: Delta Tau Delta Fraternity (Secretary), Software Development Club

PROFESSIONAL EXPERIENCE

Synopsys | Sunnyvale, CA — May 2023 - August 2023
Software Engineering Intern
- Designed and implemented a tool to analyze the log files generated by a large amount (over 10k DP workers) of distributed processing applications
  - Implemented an algorithm to extract each DP task information (runtime, CPU & memory utilization, and I/O throughput) using multithreading (4 threads to speed up 3.6x)
  - Captured the idle time between two tasks when analyzing IBM's DP log file
- Designed and implemented a tool to detect the behavior of analyzing code
  - Implemented an approach that combine system commands "strace" and "top" to detect I/O operations and CPU and memory usage of an executing code on Linux dynamically
  - Used this tool to trace and analyze the behavior of Synopsys product Proteus with several test cases
  - Discovered heavy I/O operation issues based on statistics information reported by the tool
- Tools: Intel vTune, Perforce

Milliman MedInsight | Seattle, WA — May 2024 - August 2024
Data Engineering Intern
- Coded a script to parse a log file, transform and filter out data (error messages, filetype) into a table, and import to PowerBI to perform further analytics
  - Created a KPI dashboard to plot trends, gather statistical relationships, and monitor performance
- Created reports and met with multiple data confidence platforms to find a suitable framework to ingest and manage large volumes (terabytes) of data (electronic health records and claims data) and run through various phases
- Tools: Azure Monitor, Databricks, PowerBI, Apache Spark

PROJECTS & EXTRACURRICULARS

MAGIC Lab (University of Wisconsin - Madison) — October 2024 - April 2025
Backend developer
- Implementing a 3D motion capture API that integrates real-time player movement tracking into an educational game, focused on enhancing student engagement and promoting interactive learning in STEM subjects

March Madness Neural Network — March 2024 - May 2024
- Engineered and optimized a deep learning framework using Python, TensorFlow, and scikit-learn to predict results of March Madness games using KenPom data applying advanced preprocessing, L2 regularization, and dropout techniques to prevent overfitting and enhance model accuracy
- Github Link

SKILLS

- **Languages**: C++, C, Java, Python, R, Javascript, HTML, CSS, PySparks, C#
- **Frameworks and Libraries:** React, React Native, TensorFlow, pandas, Unity, Firebase
- Multi-threaded programming, Socket programming