

Sahil Jaganmohan

Embedded Software Engineer



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sahiljaganmohan.com

Education

MS Computer Engineering
Purdue University
West Lafayette, IN
December 2022
GPA: 3.90

BS Computer Engineering
w/ Distinction
Purdue University,
December 2021
GPA: 3.90

Skills

Languages: C/C++, Java,
Python, Golang, Rust, Swift

Embedded Systems:
RTOS, I2C, DMA, SPI,
UART, GPIO, NVIDIA-
CUDA

Hardware: SystemVerilog,
ASIC Design, PCB-Design,
RTL, ARM v6-M, FPGA

Databases: SQL,
OracleDB, MongoDB

Cloud/Containerization:
Azure, AWS-EC2, Docker,
Kubernetes, Jenkins

Courses

- **Computer Architecture**
(ECE 565)
- **Applied Algorithms**
(ECE 595AA)
- **Programming Parallel Machines**
(ECE 563)
- **Operating Systems**
- **Embedded Systems**
- **Applied Quantum Computing**

Professional Experience

Apple Inc. – Cupertino, CA **01/2023 – Present**

Embedded Software Engineer – Silicon Engineering Group

Apple Inc. – Cupertino, CA

05/2022 – 08/2022

Embedded SWE Intern – Silicon Engineering Group

- Developed embedded solutions for analyzing and optimizing performance on Apple **SOCs**.
- Designed features on a **RTOS** to interface and interact with **hardware architecture**, primarily to identify/resolve **memory bandwidth bottlenecks**.

L3Harris – Melbourne, FL

05/2021 – 08/2021

Embedded SWE Intern – Space and Airborne Systems

- Proposed and architected optimized embedded solutions on an **ARM** controller for upcoming product releases, focusing on system performance.
- Integrated enhancements and custom **FPGA hardware** with micro-controller, produced a **400%** speedup.
- In-depth details are confidential as per US Title-18.

AT&T – Seattle, WA

05/2020 – 08/2020

Software Engineering Intern – AMP ML Team

- Applied **predictive analysis** and **machine learning** models to classify users under personas to improve “relevancy” for search results.
- Built an **NLP model** to identify abstract “topics” from searches.
- Improved search result relevance and user classification by **25%**.

CME Group – Chicago, IL

05/2019 – 08/2019

Software Engineering Intern – Trade Execution Systems

- Designed and implemented **fault tolerance** across Market Segment Gateways (MSGW) on the Order Entry System of the **GLOBEX** platform.
- Implemented a **dynamic state sync** across all connected **distributed systems**, client systems, **order entry systems**, and **matching engine**.
- CME CodeUp - **3rd Place** – Developed a derivative **trading algorithm**.

Leadership Experience

Purdue University – West Lafayette, IN

01/2019 – Present

ECE Graduate Teaching Assistant

- Managing 12 UTAs, leading weekly auxiliary recitations, and hosting office hours.
- **GTA** - Operating Systems, **GTA** - Data Structures & Algorithms (Head TA).

Purdue BGR – West Lafayette, IN

08/2019 – 08/2021

Team Supervisor

- Managed and organized direction of orientation leaders to support a transition of 9,000 incoming students.
- Fostered an inclusive work environment centered around interpersonal skills, through mentorship and directed group discussions.

Research Experience

Dark Matter Big Data Research

08/2018 – 02/2019

Purdue University Physics Dept.

- Utilized data analytics and algorithms to parse petabytes of sensor data collected by the XENON 100 sensor searching for Dark Matter trends.

Projects

▪ **MapReduce**

- Full-scale Map-Reduce implementation designed to run across several multi-core machines using **OpenMP** and **MPI**.