



## 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**

**Embedded SWE – Silicon Engineering Group**

**05/2022 – Present**

- Engineered embedded solutions to analyze and optimize performance on **SoCs**, collaborating with **hardware architecture** to identify and resolve **bandwidth bottlenecks**. Enhanced operational efficiency and introduced innovative metrics.
- Led the bring-up of multiple **HW IP** Blocks as the **SME**, leveraging IP capabilities for **real-time information processing** and achieving significant execution speed-ups.
- Elevated infrastructure capabilities and built solutions for **large-scale performance analytics** across more than 1000 FPGA and silicon boards.

**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%** performance speedup. US Title-18 In-depth details confidential.

**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.
- Search result relevance and user classification increased 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 - **3<sup>rd</sup> Place** – Developed a derivative **trading algorithm**.

## Leadership Experience

**Purdue University – West Lafayette, IN**

**01/2019 – 12/2022**

**ECE Graduate Teaching Assistant**

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

**Purdue BGR – West Lafayette, IN**

**08/2019 – 08/2021**

**Team Supervisor**

- Managed 15 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**.