

Tianlu Caron Zhang

Software Engineer at Apple

Summary

N/A

Experience

Software Engineer at Apple

August 2016 - Present

Software Engineer at Intel Corporation

July 2014 - July 2016 (2 years 1 month)

Mobile-backend Interface Design and Implementation

- Design and implement mobile-backend interface API using Python flask.
- Work on data modeling and storage layer of backend.
- Work with Postgres and Cassandra.

Machine Learning based Performance Projection on Distributed Systems

- Performed machine learning on high-dimensional data to predict performance of large-scale distributed systems
- Exploited C++ multi-threading to process ~100G data in 5 minutes on a single server
- Achieved 20+ times speed up over single thread implementations
- Wrote Message Passing Interface (MPI) applications for a hundred-node cluster
- Will turn the C++ program into a plug-in to integrate seamlessly with legacy code

Data Mining and Visualization Web Service

- Built a web server in python that does data mining and visualization for cost analysis
- Ran the decision tree algorithm in parallel to analyze ~5G data
- Achieved 4 times speed up over single process implementations
- Implemented in-memory cache to reduce real-time response latency to under 100ms
- Collaborated with team members to finish front end

Electrical Engineer in Testing Intern at AeroVironment

April 2013 - August 2013 (5 months)

1. Communication Protocol

Researched and implemented a protection circuit for RS485 communication I/O ports.

2. Test and Integration

Developed testing software in C# for Controller Area Network (CAN) and serial port communications, including RS232, RS485.

3. ARM programming in C.

Developed safe and efficient data transfer algorithm for PC and ARM communication via USB.

Undergrad Researcher

September 2011 - April 2013 (1 year 8 months)

Re-designing a segway robot using feedback control principles.

Working with microcontrollers and C++

Working in a group of two.

Electrical Engineer Intern at Woodward, Inc.

June 2012 - September 2012 (4 months)

Circuit board trouble-shooting;

Software testing in C;

High-level engineering design;

Getting to know production cycle.

Microsoft Student Partner at Microsoft

August 2010 - August 2012 (2 years 1 month)

Lead technology discussion on campus at UCLA

Organize campus events

Build Windows Phone 7 applications

Research Intern

June 2011 - August 2011 (3 months)

Developed a real-time DAQ system for dynamic acceleration monitoring using LabVIEW.

Worked with National Instrument CompactRIO and FPGA module.

Conducted field tests and processed the data obtained using MATLAB.

Education

California Institute of Technology

Master of Science (MS), Electrical, Electronics and Communications Engineering, 2013 - 2014

University of California, Los Angeles

Bachelor, Electrical Engineering, 2009 - 2013

Activities and Societies: Tau Beta Pi Engineering Honor Society IEEE Society for Women Engineers

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[Contact Tianlu Caron on LinkedIn](#)