Fei Wu

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Work Experience:

Microsoft (Azure Networking) -- Current
Software Engineer intern – Sunnyvale, California May. 2018 to Aug. 2018
Working on redesigning the gateway services from using virtual machines to containers.

- Designed the software architecture for the **Kubernetes**-based gateway services with multi-tenant support.
- Building the prototype for the container-based gateway service.

Abbott (Formerly St. Jude Medical)
Co-op Software Engineer -Atlanta, GA Jan. 2016 to Jul.2016
Developed and verified software testing tools in embedded Linux platform with scripting languages.

- Updated the **UI design** and added additional features to the "Final Test Program" with **Tcl/Tk**.
- Maintained the Unit Test protocol.
- Wrote **C#** programs that collect and analyze test data for the manufacturing team.

Research Experience

µFog: Enabling Platform Services in the Fog for the IoT Age
Advisors: Prof. Tushar Krishna and Prof. Umakishore Ramachandran

- **Description:**
  - Designed and constructed a system architecture for a Fog-Node in the Fog-Cloud computational continuum to provide IoT Applications with Cloud-like services with low latencies.
  - Received the President's Undergrad Research Award from Georgia Tech
- **Personal Contribution:**
  - Set up the infrastructure for **Apache Storm, Docker** and **Kafka**.
  - Built a benchmark application that uses image processing to analyze surveillance camera feeds for monitoring real-time pedestrian density. The deployment of the application on the micro-datacenter involved interfacing with real RTSP cameras, sharing streams using **Apache Kafka** as event broker and analyzing them using **Storm** as stream processing engine.
  - Integrated the pedestrian detection application with the Numenta Anomaly Detector.

Technical Strengths

Programming Languages:	C++, C#, Java, Python, Bash, Tcl/Tk, Assembly, C
Skills:	Web Frameworks (Flask, Django); Databases; Computer Networking; Message Brokers (Kafka, zeroMQ); Big Data Platforms (Spark, Apache Beam, MapReduce) Containers Technologies (Docker, Kubernetes)
Selected Courses:	Interconnection Networks; Dependable Distributed Systems; Advanced Programming Techniques

Projects:

- **Distributed Web Crawler:** Designed and built a distributed web crawler with **C#** and NetMQ (C# binding for zeroMQ)
- **Map Reduce:** Wrote map-reduce programs with **Apache Beam**, **Spark**, and **Hadoop**
- **Amazon Deal Finder:** Built a web-app using **Storm**, **Kafka**, **Flask**, and **Twilio**. It populates top deals on Amazon in categories that user specified. It also monitors products for users and sends text messages once the prices have dropped.
- **Django Web Development:** Built multiple personal websites with **Django**, AWS RDS, Nginx, and Gunicorn.
- **SDN adaptive routing policy implementation:** Improved bandwidth allocation fairness. Simulated with **Ryu** and **Mininet**.

Education

Georgia Institute of Technology – Joint B.S./M.S. Program
B.S in Computer Engineering Aug. 2014 to May 2018
M.S in Electrical and Computer Engineering Aug. 2018 to May 2019(expected)
Honors Program; Oxford Summer Program

Honors and Awards

President's Research Undergrad Award(PURA), Georgia Tech 2017
Canadian Mathematic Olympiad, ranked 6th in the Canada 2014
Asian Pacific Mathematic Olympiad, Bronze Medal 2012&2013