ZHIYUAN ZHENG

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OBJECTIVE

Seeking a full-time job in software engineering, especially in data and distributed system area.

EDUCATION

University of Illinois — Urbana-Champaign, IL

Master of Computer Science (Online Part-Time Program) — Starting Sep 2016

Master of Science in Electrical Engineering — Aug 2016

Focus: Wireless Communication — GPA: 3.81/4.00

Bachelor of Science in Electrical Engineering — May 2014

Minor: Computer Science — GPA: 3.66/4.00

Related Coursework:

Database System	Data Structures/Algorithms	Communication Networks
Wireless Communication	Distributed Systems	Smartphone Computing and App
Communication Systems	Digital Signal Processing Lab	Digital System Lab

WORK EXPERIENCE AND ACTIVITIES

Qualcomm Inc. — San Diego, CA

Product Test Engineer Internship — 06/2015-08/2015

- Construct LabVIEW automation program to test the performance of over 50 smartphone chips in LTE mode
- Performed correlation analysis in C++ to characterize chips' performance under 20 frequency bands
- Visualizing testing data and correlation analysis in d3.js.

Department of ECE in University of Illinois — Urbana-Champaign, IL

Teaching Assistant for Wireless Communication System and DSP Course — 08/2014-present

- Designed a special lab for students to build a FM receiver with SINAD measurement in Software Defined Radio
- Serving as head TA in DSP Course (Holding discussion section, office hour; Managing other TAs for grading)

RESEARCH and PROJECT EXPERIENCE

Stock Analyzer — 08/2016-present

- Implemented a high performance data processing platform using Apache Kafka, Apache Cassandra and Apache Spark from Google Finance with max speed 200,000 msg/s
- Developed a web app to visualize the stock data in real time using Redis, Node.js and Smoothe.js
- Deployed the development environment in Docker and Apache Mesos

LayeredSensing (Activity Recognition using MYO Armband) — 03/2015-05/2015

- Built a generic framework that predicts complex activities from multiple signal streams collected through sensors in nine dimensions of a wearable device (MYO Armband) using C++ and Python
- Developed a method to discover new signal patterns that do not belong to existing clusters based on Gaussian Mixer Model in Python, with 83% accuracy
- Designed a hierarchical recognition scheme to recognize users' activities by bag of words algorithm

Distributed System Design and Simulation — 01/2015-05/2015

- Implemented a distributed key-value store system in Java with maximum of 32 replicas over a network delay with maximum 10s
- Designed a 8-bit Chord-like P2P system with 32 nodes in Java which includes key-lookup and node-join function
- Simulated a mutual exclusion process for maximum of 32 threads. based on the Makeawa's algorithm

FM Receiver Software Defined Radio(SDR) Design — 05/2013-12/2014

- Built wireless communication blocks (filters, mixers, amplifiers) for RTL-SDR and USRP Platform in Python
- Constructed FM Receiver with SINAD evaluation in GNU Radio Companion
- Developed frequency tracking algorithm in python to track the change of carrier frequency

Icheatsheet (Course Project for Database System) — 11/2012-12/2012

- Develop a web application that automatically made a cheatsheet based on the web search
- Wrote a web crawler in python to automatically crawl the data for over 10,000 of key words from Wikipedia and Wolfram alpha website

SKILLS

- Programming Language: over 5000+ lines of **C/C++**, over 2000+ lines of **Java** and **Python**
- Data Analysis: Apache Hadoop, Apache Spark, Apache Kafka, Apache Cassandra, Apache Zookeeper, Apache Mesos, Redis, MySQL, Docker.
- Web Development: Node.js, HTML, CSS, D3.js, etc