



WEIHE(JOY) CHEN

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OBJECTIVE

Looking for an Entry Level Software Engineer position in order to apply my skills and experiences in designing software applications.

EDUCATION

Columbia University

M.S. in Computer Engineering

New York, NY

Expected Dec 2017

Related courses: Cloud Computing and Big Data, Machine Learning, Analysis of Algorithm, Digital Signal Processing, Operating System

Lehigh University

B.S. with High Honors in Electrical Engineering & Minor in Computer Science

Bethlehem, PA

May 2016

Academic honors: Dean's List; Joseph C. Gabuzda, Jr. Memorial Award

Related courses: Web Systems Programming, Data Structure, Systems Software, Advanced Computer Architecture

SKILLS

Programming	JavaScript, jQuery, HTML, CSS, Perl, Python, Java, C, C++, Assembly Languages
Platform	Linux
Software & Tools	MATLAB, Arduino, vim, Git, Django, \LaTeX
Language	English, Chinese (Mandarin)

PROJECT EXPERIENCE

Parking Web App

Course project at Columbia University

Jan 2017 - May 2017

- Used regular expression to analyze and format parking regulation information for each street parking sign to a JSON object and pushed to Amazon Elasticsearch
- Mapped parking spots on Google Map and provide features of reserving and reporting certain number of available parking spots to user, also give incentives in form of parking points
- Employed Amazon SQS to improve performance and ensure in-sequence processing of user requests
- Utilized Amazon SNS service to inform user of sign-up information and other notifications
- Developed a web application for user interface and deployed the server on Elastic Beanstalk

Hardware Accelerator for Image Compression (Simplified JPEG encoder with DCT)

Course project at Columbia University

Sept 2016 - Dec 2016

- Won top design in the class competition
- Optimized the SystemC code according to the programmer's view
- Applied Stratus knobs to reduce design area and latency

A Study of Side-Channel Vulnerability Metrics at the Shared Memory Interface

Research under the supervision of professor Xiaochen Guo at Lehigh University

Jan 2016 - May 2016

- Developed a new metric for calculating side-channel vulnerability factor
- Designed an improved scheduling policy that performs well both on latency and security
- Utilized Machine Learning tools to imitate and analyze the attacker job insertion
- Analyzed the reliability and caveat of the new method and generated the guide of use

Optical Detection of Epileptic Activity

Senior Project collaborated with professor Yevgeny Berdichevsky at Lehigh University

Aug 2015 - May 2016

- Developed a low-cost imaging system capable of examining multiple samples simultaneously
- Created a software with user interface using MATLAB to support controlling of each subsystem and display of processed signals
- Optimized the control code for subsystem parallelism

LEADERSHIP EXPERIENCE

Fundamentals of Programming Course

Teaching Assistant

Aug 2014 - May 2016

- Assisted professor in answering questions and resolving issues during labs
- Guided students through questions regarding homework, lab, and programming concepts during office hours