WEIHE(JOY) CHEN

4291 Norwalk Drive, Apt V214, San Jose, CA 95129· wec3217@gmail.com· (917) 601-9151
www.linkedin.com/in/weihe-chen · wc2582.github.io

EDUCATION

Columbia University New York, NY Dec 2017
M.S. in Computer Engineering
Related courses: Cloud Computing & Big Data, Big Data Analytics, Analysis of Algorithm, Machine Learning, Operating System

Lehigh University Bethlehem, PA May 2016
B.S. with High Honors in Electrical Engineering & Minor in Computer Science
Academic honors: Dean's List; Joseph C. Gabuzda, Jr. Memorial Award
Related courses: Web Systems Programming, Data Structure, Systems Software, Advanced Computer Architecture

TECHNICAL SKILLS

Programming	Java, JavaScript, Python, HTML, CSS, RESTful API, SQL, Swift, Perl, C, C++, MATLAB, shell
Platform & Tools	Linux, AWS, MongoDB, Redis, Docker, Nginx, AJAX, iOS, Arduino, vim, Git
Frameworks	NodeJS, Angular, Express, Django, Flask, Hadoop, Spark, Bootstrap

WORK EXPERIENCE

Lehigh University
Research Assistant in the field of Side-Channel Vulnerability Jan 2016 - May 2016
- Used a cycle accurate architectural simulator, SESC, to evaluate the memory side-channel vulnerabilities (C++)
- Leveraged machine learning tools to imitate and analyze the attacker job insertion (MATLAB)
- Developed a new quantization metric for side-channel vulnerability
- Designed a scheduling policy that performs well in both performance and security
- Analyzed the reliability and caveat of the new methods and generated the guide of use (Perl)

PROJECT EXPERIENCE

Personal Project
Collaborative Online Judge System Dec 2017 - Present
- Implemented a web-based collaborative code editor that supports multiple user editing simultaneously (ACE, Socket.io, Redis)
- Designed and developed a single-page web application for coding problems (Angular2, Node.js, MongoDB)
- Built a user-code executor service to run user's code and generate result message (Docker, Flask)
- Refactored and improved system throughput by decoupling services using RESTful API and load balacing by Nginx (REST API, Nginx)

Columbia University
Odds Recommendation System for Bookies Sept 2017 - Dec 2017
- Developed a web app to help bookies make their best bet (Django, AngularJS, Bootstrap, Live Odds API)
- Trained a data model for prediction of odds (spark)

Movie Recommendation System Sept 2017 - Dec 2017
- Derived vector values from user comments with Feature Extraction and Transformation API (spark)
- Utilized spark machine learning library to predict missing entries of user ratings, and generated recommendations for each user with the result

Parking Web App Jan 2017 - May 2017
- Built a web app to help people find parking spaces in NYC based on parking regulation and parking garage availability (Flask, ParkWhiz API)
- Formated NYC DoT parking regulation data with regular expression matching and pushed formatted data to Elasticsearch (Python, AWS Elasticsearch)
- Designed the front-end which provides visualization of NYC map and user interactions (JavaScript, JQuery, AJAX, Bootstrap, Google Maps API)
- Implemented SMS and email notification function (AWS SNS, SQS)

Lehigh University
Optical Detection of Epileptic Activity - Senior Project Aug 2015 - May 2016
- Developed a software with Graphical User Interface to support controlling of each subsystems and displaying of processed signals (MATLAB, Simulink)
- Developed a low-cost imaging system that allows simultaneous examination of multiple samples (Arduino)
- Optimized the control code for subsystem parallelism