JIAJUN ZHANG

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OBJECTIVE

Software Development Engineering, Full-time

EDUCATION

COLUMBIA UNIVERSITY
M.S. Computer Engineering
Expected Dec 2017 | GPA: 3.54

ZHEJIANG UNIVERSITY
B.E. Information and Communication Engineering
June 2016 | GPA: 3.72

COURSEWORK

GRADUATE
Operating Systems
Analysis of Algorithms
Computer Networks
Database Systems Implementation
Big Data Analytics

UNDERGRADUATE
Functional Programming
Data Structures
Computer Architecture
Theory of Probability

SKILLS

LANGUAGES
Java • Python • C • SQL

BACK END
Flask • PostgreSQL • SQLAlchemy

FRONT END
HTML • CSS • JavaScript • jQuery

OTHER
Linux • Git • Google Cloud Platform

AWARDS

- First Prize in the National Undergraduate Electronic Design Contest, Zhejiang Prov. | 2015
- ISEE Texas Instruments College Student Grant, Zhejiang University | 2014-2015

WORK EXPERIENCE

FULL STACK DEVELOPER | Interactive Pedestrian Injury Mapper Web App, https://petercanmakit.github.io/IPIM/
May 2017 - Aug 2017, Columbia University Medical Center, New York, NY

- Used **Google Maps** to develop an interface for victims to visualize the route on which they were hit by a vehicle
- Built a questionnaire view to collect victims' information, and embedded methods for monitoring the user behavior
- Worked with **PostGIS** extension on **PostgreSQL** for location storing
- Created an admin interface to retrieve data and provide the statistics about the datasets using **Chart.js**, and to cluster the accident spots on the map
- Built a wrapper (`Gapy`) for **Google Analytics** to retrieve page views and event tracker information so that it makes constructions on **Flask** server app easier

PROJECT EXPERIENCE

UdpChat [Java, Socket Programming]
Feb 2017 - Mar 2017, Columbia University

- Developed a P2P chat program with functionalities of online / offline chatting
- Built the server as it broadcasts the contact information of all users and manages messages for offline users
- Applied acknowledgment messages to provide reliable communication

HTTP Server [Linux, C , Socket Programming]
Jan 2017 - Feb 2017, Columbia University

- Built a web server which handles HTTP requests, using socket programming
- Starting from single process, developed to multiple processes and threads in order to increase throughput

Other Projects

- Built an image processing webpage (`imgProc`) [JavaScript]
- Created a music sharing **Web App** [Python, SQL, Google Cloud, Flask]
- Built a linear **File System** on loop devices [Linux Kernel, C]
- Implemented a Random-Robin **Task Scheduler** [Linux Kernel, C]
- Wrote a program to simulate Go-Back-N Transfer Protocol and Distance Vector Routing Algorithm [Java, Socket Programming]
- Created a research tool for motor collision analysis [Hadoop, Pyspark]

RESEARCH EXPERIENCE

TEACHING ASSISTANT | CSEE 4119 Computer Networks
Sep 2017 - present, Columbia University, New York, NY

- Provide weekly individual instruction and guidance to students]
- Cooperate with the TA team to help the professor assess exams, written assignments and programming projects

RESEARCH ASSISTANT | Enhancement of the Palmprint Directional Field
Nov 2015 - May 2016, Zhejiang University, Hangzhou, China

- Utilized **OpenCV** to extract the directional field and preprocess it
- Implemented a Random Forest algorithm with **scikit-learn** to enhance the palmprint directional field
- Wrote a **Python** visualization tool to analyze the enhanced directional field