JIAJUN ZHANG

Address: 526 W 123 ST, New York, 10027 | **Phone:** 917-640-3324 | **Email:** z.jiajun@columbia.edu | **Webpage:** http://petercanmakeit.com
LinkedIn: https://linkedin.com/in/zhang-jiajun | **GitHub:** https://github.com/petercanmakeit

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://PETERCANMAKEIT.GITHUB.IO/IPIM/ *[Python, Flask, JavaScript, PostgreSQL]*
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

Search Query Expansion *[Java, Google CSE]*, Sep 2017 - Oct 2017
- Built an information retrieval system based on Google CSE API
- Implemented Rocchio algorithm to reformulate the seed query to improve retrieval performance
- Boosted the average accuracy up to 90% under two iterations

UdpChat *[Java, Socket Programming]*, Feb 2017 - Mar 2017
- Developed a P2P chatbot 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 protocol to provide reliable communication

HTTP Server *[Linux, C, Socket Programming]*, Jan 2017 - Feb 2017
- 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]*
- Simulated 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 Random Forest algorithm with **scikit-learn** to enhance the palmprint directional field
- Wrote a **Python** visualization tool to analyze the enhanced directional field