(408) 306-9383
825 Weyburn Terrace
Los Angeles, CA 90024

Hengyu Lou

hylou34@gmail.com
https://github.com/henrylou
https://www.linkedin.com/in/hengyulou

EDUCATION

University of California, Los Angeles (UCLA) — Los Angeles, CA
- M.S. in Electrical and Computer Engineering (GPA: 3.6/4.0) — *Sep. 2017 - Expected Mar. 2019*
- Courses: Database Systems, Computer Network, Computer Systems, Data Mining, Pattern Recognition, Graphs and Network Flows, Computer Graphics, Matrix Analysis, Linear Programming

Shanghai Jiao Tong University (SJTU) — Shanghai, China
- B.S. in Electronic Science and Technology (GPA: 3.7/4.0, Ranking: 4/65) — *Sep. 2013 - Jun. 2017*
- Courses: Data Structures, C++ Programming, Thinking and Approach of Programming, ARM Embedded Systems

TECHNICAL SKILLS

Languages: Java, Ruby, SQL, PHP, Python, JavaScript, HTML, CSS
Framework/Library: Ruby on Rails, Bootstrap, React, NodeJS
Miscellaneous: MySQL, MongoDB, Spark, NPM, Git, AJAX, Shell script, Linux

EXPERIENCE

Endorsify — Los Angeles, CA
Software Engineer Intern — *Jun. 2018 - Sep. 2018*
- Built **PHP** commands of **Laravel** and scheduled them with cron to automatically update **MySQL** with Eloquent ORM
- Integrated **Elasticsearch** with **MySQL** which allow admins to perform CRUD operations in them synchronously
- Created analytic web pages with Google Analytics API and **ChartJS** using **PHP, JavaScript** and **HTML**

PROJECTS

Photo Management App Development (website: https://photo-management-hengyu.herokuapp.com)
- Built a web app which allows users to pay to manage photos using **Ruby on Rails**, **Bootstrap** and **PostgreSQL**
- Implemented authentication system with devise gem and used SendGrid gem to send confirmation emails
- Applied Stripe gem to deal with online payment and used Carrierwave gem and Amazon S3 to upload and store images

Blog Website Development (website: https://alpha-blog-hengyu.herokuapp.com)
- Constructed a web app for users to post blogs based on **MVC** using **Ruby on Rails**, **Bootstrap** and **PostgreSQL**
- Designed SQL schema of 1:N and M:N relationships and used Active Record ORM to access PostgreSQL database
- Implemented authentication system from scratch, user representation with Gravatar and conducted automated testing

Online Survey System Design (website: https://email-survey-hengyu.herokuapp.com)
- Built a web app for users to conduct online surveys by payment using **NodeJS/Express**, **React** and **MongoDB**
- Implemented Google OAuth 2.0 with PassportJS middleware and used Stripe API to handle online payment
- Applied **Mongoose** to create surveys, to access **MongoDB** and used SendGrid API to send surveys through emails

Movie Database System User Interface Development
- Created a web interface for users to perform CURD operations in **MySQL** using **PHP, HTML** based on **LAMP** stack

Real-Time Hand Gesture Recognition System Design
- Built an app which recognizes static and dynamic hand gesture through positions of fingertips using **Java** and **OpenCV**
- Applied K-curvature and convex hull algorithms to detect fingertips and used Kalman filter to track them

Twitter Streaming Implementation with Spark
- Constructed an app that tracks real-time top 10 twitter hashtags based on **Spark, Python** and Tweepy API
- Obtained real-time tweets filtered by keyword through a TCP socket stream using the Twitter HTTP client

Twitter Handle Interface Development (website: https://recent-tweets-hengyu.herokuapp.com)
- Built an interface that takes a twitter handle and displays the user's recent tweets using **Ruby on Rails** and Twitter API

Window-Based Reliable Data Transfer Protocol Implementation
- Implemented a congestion window-based TCP over UDP which transfers files reliably using **C** socket programming