Yichen Liu

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A graduate student from CMU completing the second semester of a master's degree in ECE, with passion for coding, enjoy working on my own initiative or in a team.

Education

Academic Qualifications

Carnegie Mellon University
M.S in Electrical and Computer Engineering, GPA: 3.8/4.0   *Sept. 2014–Dec. 2015 (Expected)*

Sun Yat-Sen University
B.S in Computer Science, GPA: 3.8/4.0   *Sept. 2010–Jul. 2014*

Notable Projects

○ **Cloud Computing Project:** *'Twitter Analytic Web Service'*

I was the leader of a three person team. This cloud computing project aimed to provide query services of tegabytes of real-world tweet data with high throughput requirement(15,000rps). Our service was deployed on Amazon Web Service. As a member of team, my work included construction of efficient frontend server, maintenance and optimization of two backend database, and load balancing of them.

○ **Evolutionary Computation Project:** *'Air Traffic Flow Management'*

Evolutionary computation(EC), a kind of heuristic optimization method, can be applied to solve optimization problems. During my study of EC, I adapted differential evolution algorithm to optimize the schedule of all nationwide domestic flights.

○ **Feature Extraction Project:** *'Feature Extraction in Activity Recognition'*

Activity recognition(AR) is widely used in context-aware applications and interaction. With high dimensional time-series data, feature extraction directly affects the performance of classification. I implemented three algorithms namely PCA, LDA and MFA and compared their influence on AR.

○ **Cineaste:** *'Douban Movie Recommendation System'*

I created a personalized movie recommendation system for Douban users (China's version of IMDB). During this project, I crawled the rating data from douban, implemented ALS(a collaborative filtering algorithm) from scratch, built and deployed a website for users to browse their recommendations.

Awards

○ **Yahoo! Hack Day Beijing** *Excellence Award*
○ **China National Mathematics Modeling Contest** *Excellence Award*
○ **Sun Yat-Sen University Computer Programming Contest** *Second Award*
○ **Sun Yat-Sen University Scholarship** *Second Award×3*

Previous Employment

Tencent   **Shenzhen**
Backend Development Intern   *July 2013–September 2013*

The online game industry is prompting. However, bugs could come with more players which would cause huge economic loss to the game company. During my internship, I was responsible for developing monitoring system specifically for moneyflow to detect bugs inside games.

Technical and Personal skills

○ **Programming Languages:** Advanced in: C, C++, Python,
Also have programming experience with: Java, Scala, Go, PHP, Javascript, HTML, LaTeX.

○ **Industry Skills:** Unix, MySQL, AWS, Numpy, Scikit-Learn, Hadoop, Hbase, Nginx, Matplotlib.

○ **Communication Skills:** English (Fluent), Chinese (Fluent)