Hao Fu

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EDUCATION

B.S. at Fudan University (GPA: 3.3/4.0) September 2014 - Present

- Major: Computer Science and Technology (Data Science & Technology)

ENGLISH PROFICIENCY

TOEFL

- Total: 110 (Reading: 29; Listening: 28; Speaking: 26; Writing: 27)

GRE

- Verbal: 154; Quantitative: 170; Analytical Writing: 4.0

ACADEMICS

Research Interests

- Data Mining, Machine Learning.

Mastering following programming languages

- Python, C, C++, Java, Matlab, R, MySQL, LaTeX.

CURRICULUM

Data Science

- Big Data Analytics, Artificial Intelligence, Neural Network and Deep Learning, Machine Learning, Social Network Mining.

Mathematics

- Statistics, Time Series, Numerical Algorithms, Discrete Mathematics, Linear Algebra, Mathematical Analysis.

Computer Science

- Introduction to Computer System, Distributed Systems, Database, Data Structure, Digital Logic and Component Design.

PROJECT EXPERIENCE

New York Taxi Analytics July 2017

- Set up a Spark cluster for parallel processing of gigabyte scale datasets. Implemented in Python using PySpark.
- Derived the busiest and most expensive hailing locations through spatial trajectory clustering to assist passengers and drivers.
- Constructed machine learning models that predict time of arrival.
- Experienced with Google Charts and Carto for data and geometric visualization.

Large-scale Video Categorization January 2017

- Used Python to implement a regularized deep neural network on the Fudan-Columbia Video Dataset (91,223 videos of 239 classes) and obtained 72.4% in precision.
- Exploited feature and class relationships to improve performance.
- Conducted GPU programming to deal with massive data processing.

- This project reproduced work of Jiang *et al.* in "Exploiting Feature and Class Relationships in Video Categorization with Regularized Deep Neural Networks".

Operating System Emulator June 2016

- Programmed in C to emulate the basic functions of an operating system.
- Implemented assembly instructions according to i386 reference manual.
- Other features included registers, stack frames, and expression evaluations.

Database Management System May 2016

- Created a Java applet for querying player statistics from the mobile game One Piece Cruise. The DBMS supported query, insert, edit and delete operations.
- Built the GUI using AWT and Swing. The database operations were programmed with MySQL and used IBM Bluemix for data storage.

Others

- Movie recommendation system, text categorization, Chinese poetry generator, stock price analysis (time series), Texas Poker AI bot, image spiders.

INTERNSHIPS

Intern in Shanghai IC R&D Center, China November 2017 - Present

- Applied invention patents as a joint inventor.
- Devised new read-write methods for chip identifiers based on encryption algorithms SHA512/SM3/SM4.

Research Assistant in iDVx Lab at Tongji University, China July - September 2017

- Worked with Professor Nan Cao on an ACM CHI paper: "Redirect Your Attention: Interactive Situation Awareness guiding by Users Feedback".
- Proposed an effective algorithm framework that helps domain experts make decisions in situation awareness tasks.

AWARDS

- Meritorious Winner of Mathematical Contest In Modeling January 2017
- Third Prize of the Scholarship for Outstanding Students at Fudan University 2015 & 2016

SERVICES

Volunteered at the Shanghai Forum on Software Trade 2017 October 2017