Maoran Xu | Curriculum Vitae

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DOB: Oct. 16, 1996

Education

Bachelors of Science at Fudan University

Mathematics and Applied Mathematics (Data Science & Technology) *Sep 2014 – Present*

Research Interests: statistical learning, statistics in social sciences, data visualization

Relevant Courses:

- Mathematical Analysis (I, II&III)
- Statistical Computing
- Statistics: Principals, Methods and R (I&II)
- Advanced Algebra (I&II)
- Introduction to Statistical and Machine Learning
- Time Series Analysis

Honors & Awards

2017: Meritorious Winner of Mathematical Contest In Modeling

2015-17: Professional Excellence Scholarship for Mathematics Students at Fudan University

2015-17: Third Prize of the Scholarship for Outstanding Students at Fudan University

2014: First Prize of the Scholarship for Freshman Students at Fudan University

Professional Experience

Research Assistant

SUPERVISOR: NAN CAO AT IDVX LAB *May 2017 – Present*

Developed an interactive situation awareness framework for security domain experts. Introduced a novel algorithm framework to support interactive anomaly detection and combined one-class SVM with metric learning to make a good realization.

Publication: M. Xu, R. Zhao, H. Fu, T. Wu, Y. Shi & N. Cao. Redirect Your Attention: Interactive Situation Awareness Guiding by Users' Feedback. Submitted to CHI'18.

Academic Projects

Metro Line Visualization

Cooperated with Dr. Yifan Hu at Yahoo Lab *Current*

Used metro map metaphor for genre data visualization with supporting graph generation, mixed integer programming and graph optimization. Interpreted data with metro lines, intersections and parallels.

New York City Taxi Analysis

Course Project for Large Scale Distributed System *Jul 2017*

Used parallel computing tools on big scale datasets. Statistical and clustering methods were implemented on NYC open datasets to analyze driving patterns.

Texas Hold'em Bot

Course Project for Introduction to Artificial Intelligence *Jul 2017*

Designed a robot who played Hold'em Bot with human, which adopted reinforcement learning strategy and kelly-criterion rule for investment.

US Baby Name Analysis

Course Project for Time Series Analysis *Jul 2017*

Applied typical time series model on baby name statistics over 20th century in U.S.A.. Made prediction and interesting relationship with big events on these data.

Large-scale Video Classification

Course Project for Statistical Learning and Machine Learning *Jan 2017*

Implemented neural network on large-scale video datasets for categorization. Implemented RBM and PCA for dimension reduction and utilized class relationships and feature fusion to gain higher accuracy.

Quanquan App.

Product for ECTE China *Nov 2016*

Designed an algorithm system for Quanquan, an educational application helping test takers better prepare for professional tests. The application had already been released in both IOS and Android markets.

Skills & Interests

Programming: PYTHON, R, MATLAB, C, JAVASCRIPT, LaTeX

Software : SPSS, ADOBE PHOTOSHOP

Interests: PIANO, CLARINET, CHORAL SINGING

Languages: MANDARIN (Native speaker), ENGLISH (Professional working proficiency), JAPANESE (Good)