

Xiao Ma

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EDUCATION

Shanghai Jiao Tong University (SJTU), Shanghai
Bachelor of Science in COMPUTER SCIENCE
GPA: 3.75/4.0 (Major Curriculum), 3.59/4.0 (Overall)
GPA(Last Year): 3.85/4.0(Major Curriculum), 3.72(Overall)

2013 - 2017(Expected)

PUBLICATION

Xiao Ma, Zhenzhe Zheng, Fan Wu and Guihai Chen. "DynaCrowd: a Trust-Based Model for Time Series Prediction in Crowd Sensing Networks", preparing for submission to *IEEE International Conference on Communications 2017*

RESEARCH EXPERIENCE

Time series modeling in Crowd Sensing Network

Nov, 2015 - present

Supervised by Professor Fan Wu

Advanced Network Laboratory

- Designed a *Trust-Based Dynamic Bayesian Network* to model the noisy *Time Series* in the *Crowd Sensing Networks*, catching the *Trust-Worthiness* of the data providers
- Developed an *Enhanced EM Algorithm* to learn the parameters for the Dynamic Bayesian Networks
- Experimented on the GPS data of over 10000 taxis collected during one month in Shanghai using MATLAB, with a result outperforming the state-of-art *Time Series* modeling methods used in *Sensor Networks*

Entertainment Hot Topics Prediction in Social Networks

Mar, 2016 - present

Supervised by Professor Xiaofeng Gao

Data Communications and Data Engineering Laboratory

- Developed Web Crawlers and collected data over 100000 tweets and built the database.
- Designed a *Topic Model* based on *LDA* with preprocessing of the data by *Hash-Tag Based Tweet-Pooling*, identifying the entertainment topics
- Designed a statistic prediction method combining *Gamma Distribution*, *Gaussian Distribution* and *Beta Distribution* to predict whether and when a topic would become a hot topic

Segmentation of Abdominal Adipose Tissues via Deep Learning

Sep, 2015 - Jan, 2016

Supervised by Professor Bin Sheng

Visual Media and Data Management Laboratory

- Developed a *Deep Neural Networks* to distinguish the visceral adipose tissues and subcutaneous adipose tissues of a medical image with the error rate less than 2%
- Developed the *Volume Rendering* with OpenGL on MFC to render the continuous segmented slices into 3D Model
- Using CUDA GPU programming to accelerate the massive vector calculations during the segmenting process, obtaining a 57% speed up compared with CPU
- Designed the user interface using MATLAB

SELECTED PROJECTS

Simplified C Language Compiler

Sep, 2015 - Jan, 2016

Self-Developing, Supervised by Professor Li Jiang

- Designed a lexical analyzer reading in the code and separate them into tokens
- Performed the syntax analysis using Yacc, then did the semantic analysis and syntactic checking after generating a parse tree
- Transformed the intermediate code into LLVM with 0% error rate

Smart Car Controlling System Using Android Smartphones

Sep, 2015 - Jan, 2016

Leader of a Three-People Group, Supervised by Professor Shiwen Zhang

- Programmed on two Android Smart Phones, one for controlling the car, another for picturing
- Utilized *Socket* to communicate between two Android Smart Phones
- Controlled the car by Bluetooth

Simple CPU and Memory Replacement policy design

Mar, 2015 - Jun, 2015

Self-Developing, Supervised by Professor Fan Wu

- Simulated the CPU scheduling and implemented different page replacement policies, including FIFO, LRU, and Random

- Designed a novel page replacement policy, improved NFU, achieving a improvement in the page fault by over 200%

Smart Car Tracking and Auto-Controlling System

Sep, 2014 - Jan, 2015

Leader of a Three-People Group, Supervised by Professor Shiwen Zhang

- Programmed on computer and smart car, processing images captured by camera with OpenCV, identifying the patch and the location of the car
- Designed an algorithm to determine the movement of the car

WORK EXPERIENCE

Internship at **Intel** Asia Pacific R & D Center(WTO Group)

Jun, 2016 - present

- Adjusted benchmarks including *Octane*, *Sunspider* and *Jetstream* to enable single case test on the *D8*, a shell of the *V8* Javascript engine, which is used in the *Chrome* browser
- Developed an *Auto-Test Framework* based on *Python* and *Shell*, then collected a considerable amount of data
- Identified and analyzed critical patches causing regressions, then uploaded corresponding patches to fix the regression

AWARDS

Academic Excellence Scholarship

2014

Honorable Mention of Mathematical Contest In Modeling

2016

Academic Excellence Scholarship

2016

SKILLS

Programming:	(Proficient) C/C++, MATLAB, Python, Shell, \LaTeX (Familiar) Java, JavaScript, HTML5, CSS
Language:	English (Fluent, TOEFL: 106; GRE: 321+4.0), Mandarin (Native)
Others:	Vocality, Calligraphy, Basketball, Leadership