

# Xiao MA

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## EDUCATION

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**Shanghai Jiao Tong University (SJTU), Shanghai** 2013 - 2017  
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)

## AWARDS

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Academic Excellence Scholarship 2014  
Honorable Mention of Mathematical Contest In Modeling 2016  
Academic Excellence Scholarship 2016

## RESEARCH EXPERIENCES

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**Time series modeling in Crowd Sensing Network** 2014 - present  
*Supervised by Professor Fan Wu* *Advanced Network Lab*  
· **Independent Study.** Designing a system model and learning scheme, aiming to model the sparse temporal data collected in the *crowd sensing network*, finding the latent temporal correlation between different time tick and the spatial correlation among different time series through modeling by Dynamic Bayesian Network. We developed an enhanced EM algorithm to learn the parameters of the model under uncertainty. This method can support almost all the time series functionalities, such as smoothing, missing value imputation, forecasting and so on. This model outperforms the state-of-art method in the *crowd sensing network*.

**Hot Topics Prediction in Social Networks** 2015 - present  
*Supervised by Professor Xiaofeng Gao* *Advanced Network Lab*  
*National Undergraduate Training Programs for Innovation and Entrepreneurship*  
· **Independent Study.** For the huge amount of data of social networks and the correlation within topics, using topic modeling to discover the different latent topics among the archives of tweets and analyzing the “acceleration” and “sum” of the topic’s click rate between time slices using probabilistic modeling by Gamma distribution and Beta distribution, enabling the prediction of whether the topic will become a hot topic and when it will become a hot topic. This work will provide a efficient and reliable synthesized approach for hot topic prediction in social network.

## WORK EXPERIENCE

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Internship at **Intel Asia Pacific R & D Center(WTO Group)** 2016 - present  
· **Participant of Open Source Project.** Mainly responsible for regression analysis on V8 engine, a Javascript compiler embedded in Chrome browser, including building automatic test framework based on Python and Shell, targeting critical patch, analyzing the patch and proposing plausible optimizing opinion. Uptill now, more than 20 critical patch have been identified, three of which has been optimized, D8-shell for different platforms including IA32, X64, ARM can be automatically built then tested on various benchmarks, and reports would be generated automatically.

## NOTABLE PROJECTS

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**Segmentation of Abdominal Adipose Tissues via Deep Learning** 2015  
*Supervised by Professor Bin Sheng*  
· **Leader of a group of 3 people.** Designing a deep learning algorithm to separate visceral adipose tissues and subcutaneous adipose tissues and an user interface using MATLAB, combining with CUDA based GPU acceleration, then volume rendering the medical images with OpenGL built on MFC. The difference between the result of our algorithm and the manual separation is at most 5%.  
**Abilities:** Deep-Learning Neural Networks, MFC, MATLAB, GPU Programming

**Smart Car Controlling System Using Android Smartphones** 2015  
*Supervised by Professor Shiwen Zhang*  
· **Leader of a group of 3 people.** Programming on two Android phones, one for controlling and data collection, the other for picturing on the car. We use socket to send messages and video between two smart phones, and use bluetooth to communicate between the phone and the car.  
**Abilities:** Android programming, Bluetooth communication, Socket communication.  
**Smart Car Tracking and Auto-Controlling System** 2014  
*Supervised by Professor Shiwen Zhang*

· **Leader of a group of 3 people.** Programming on computer and smart car, processing images captured by camera with OpenCV, and designing an algorithm to automatically determine the route of the car, and the latency is at most 5ms.  
**Abilities:** Image Processing with OpenCV, Bluetooth communication, MCU development.

**Simple CPU and Memory Replacement policy design** 2014  
*Supervised by Professor Fan Wu*

· **Independent Study.** Developing a simple CPU in Linux and designing my own memory replacement policy, the performance of which is almost 20 times better than traditional policies, such as LRU and LFU.  
**Abilities:** Basic understanding of CPU scheduling and programming with Linux API.

SKILLS

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