Chacha Chen
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Education

- **Shanghai Jiao Tong University** — Shanghai, China
  B.E. in Computer Science — *Sep.2015 – Jun.2019 (Expected)*
  - **GPA**: 3.68/4.0 (87.1/100)
  - **Advisor**: Prof. **Weinan Zhang** and Prof. **Zhenhui (Jessie) Li** (Penn State University)
- **Technical University of Munich** — Munich, Germany
  Exchange Student in Department of Informatics — *Apr.2017 – Sep.2017*

Research Interests

- **Data Mining, Reinforcement Learning, Applied Machine Learning**

Submissions & Pre-prints

- **M-IntelliLight: a Deep Reinforcement Learning Approach for Multi-Intersection Traffic Signal Control**
  - Hua Wei, **Chacha Chen**, Kan Wu, Guanjie Zheng, Zhengyao Yu, Vikash Gayah and Zhenhui Li
  - Submitted to the International World Wide Web Conference (**WWW**), 2019.

Research Experience

- **Deep Reinforcement Learning for Traffic Signal Control** — Hangzhou, China
  Research Intern, Advisor: ***Prof. Zhenhui (Jessie) Li*** — *Jul.2018 - Present*
  - Designed and implemented a reinforcement learning (RL) approach with justification on state and reward design for multi-intersection traffic signal control along arterials
  - Draw a connection between RL method and classical transportation theory for the first time
  - Justified our RL model in comparison to the closed form solution under the same simplified experiment settings
  - Achieved the state-of-the-art performance in simulation on both synthetic and real-world traffic data
  - Started conducting field experiments in Hangzhou China
- **Mining Homeownership Patterns** — Shanghai, China
  Research Assistant, Advisor: ***Prof. Tingting Lu*** *(Social Science) and* ***Prof. Weinan Zhang*** — *Mar.2018 - Present*
  - Formulated the task into a multi-class classification problem in machine learnig based on the data collected from a national scale survey
  - Implemented logistic regression and tree model to predict the homeownership
  - Interpreted the machine learning models with feature ranking and visualization which further reveals the mechanism and pattern of homeownership
- **SVM Toolbox for Both Indefinite and Semi-definite Kernel Learning** — Shanghai, China
  Research Assistant, Advisor: ***Prof. Xiaolin Huang*** — *Sep.2017 - Mar.2018*
  - Coauthored a software package which accommodates Support Vector Machine (SVM) classification algorithms with indefinite kernels and semi-definite kernels
  - Incorporated Sequential Minimal Optimization (SMO) in the traditional SVM algorithm
  - Provided various kernel functions, including TAHN, TL1, gaussian, polynomial and linear kernels
  - Implemented various vector machine algorithms, including KVM, LSSVM, kPCA

Extracurricular Activity

- **Debate Team**: Won the first prize in the university debate competition
- **Volunteer**: Organized a bazaar selling study notes to help people with kidney disease

Skills

- **Programming**: Python, C/C++, SQL, Bash, Latex
- **Languages**: GRE: V155, Q170, AW3.0 TOEFL: 101 (Speaking 22) 103 (Speaking 20) IELTS: 7.5