

Chacha Chen

CS Department, SJTU

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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

- **Deep Reinforcement Learning for Traffic Signal Control along Arterials**
 - 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
 - Drawn 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 learning based on the data collected from a national scale survey
 - Implemented logistic regression and tree model to predict the homeownership
 - The construction of machine learning models was further interpreted by feature ranking and visualization to reveal the mechanism and pattern of homeownership change
- **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
 - Implemented traditional Support Vector Machine with Sequential Minimal Optimization (SMO)
 - Implemented 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 (Speaking22) 103 (Speaking20) IELTS: 7.5