TIAN XIE

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EDUCATION

University of Southern California, Los Angeles, California, USA *August 2017 - May 2020*
M.S. in Computer Science (GPA: 3.8 / 4.0); Advisor: Cyrus Shahabi

- Selected Courses: Machine Learning for Knowledge Extraction; Deep Learning; Web Technologies;

Fudan University, Shanghai, China *Sept. 2013 - July 2017*
B.S. in Physics (GPA: 3.4 / 4.0);

- Selected courses: C++ Programming; Python Programming; Foundations and Applications of Data Mining

RESEARCH PROJECTS

Store Recommendation Based on Customers' Implicit Feedback

- Extracted and analyzed the trajectory sequences from raw Wi-Fi *log* records.
- Qualitative defined the two types of store interaction, *check-in* and *pass-by* according to the signal intensity statistic.
- Mining customers shopping implicit interest based on Hidden Markov Model and other Bayesian modeling.
- Using DTW and other clustering algorithms to find similar shopping behavior. Visualized and compared the results with the real trajectory movement.
- Based on customers' shopping pattern, feature engineering is applied to build a time-aware recommendation system by using deep learning models e.g. LSTM and RNN.

PUBLICATIONS

Tian Xie*, Chaoyang He*, Yu Rong, Wenbing Huang, Junzhou Huang, Xiang Ren, Cyrus Shahbi. (* equal contribution) Bipartite Graph Neural Networks for Efficient Node Representation Learning. *arXiv:1906.11994*, 2019

Chaoyang He, **Tian Xie**, Peilin Zhao, Junzhou Huang, Tong Zhang, Cyrus Shahabi. Federated Multi-task Deep Learning with Decentralized Periodic Averaging SGD. Preprint, 2019

WORK EXPERIENCE

Tencent AI Lab, *Research Scientist Intern*, Shenzhen, China *July 2019 - Sept. 2019*

- Proposed a graph based deep learning model on large-scale social networks. The model improves the classification accuracy by 10%. Work was published on *arXiv:1906.11994*.
- Proposed a reinforcement learning based algorithm on graph molecular generation.

Meizu Technology Co., Ltd, *Software Engineer Intern*, Zhuhai, China *July 2018 - Sept. 2018*

- Proposed a collaborative filtering model from scratch to recommend news for users using Spark. By incorporating various types of side information e.g. users browsing time, click-through rate, the model has more than 10% performance improvement.

University of Southern California, *Teaching Assistant*

- Analysis for Algorithms (CSCI 570) *Fall 2019*
- Machine Learning for Data Informatics (INF 552) *Fall 2018, Spring 2019*

SKILLS

Programming: Python; Java; C++; Matlab; JavaScript.
Web: Django; Apache; MongoDB; MySQL; AWS.
Frameworks: Pytorch; TensorFlow; Spark; Hadoop.