

ZIQUIANG CHENG

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EDUCATION

Zhejiang University

Sep. 2018 - Now

M.S. Candidate (3rd Year), Computer Science & Technology

Advisor: Yang Yang and Yueting Zhuang

Zhejiang University

Sep. 2014 - Jul. 2018

B.S., Computer Science, Thesis advisor: Yang Yang

Average GPA: 4.50/5.0, rank 4/180

RESEARCH INTERESTS

Time Series Modeling, Social Network Mining, Computational Social Science, Graph Neural Networks

PUBLICATIONS

- **Ziqliang Cheng**, Yang Yang, Wei Wang, Wenjie Hu and Yueting Zhuang. “Time2Graph: Revisiting Time Series Modeling with Dynamic Shapelets”. In Proceedings of the Thirty-Forth AAAI Conference on Artificial Intelligence (AAAI’2020, poster), 2020.
- **Ziqliang Cheng**, Yang Yang, Chenhao Tan, Denny Cheng, Alex Cheng, and Yueting Zhuang. “What Makes a Good Team? A Large-scale Study on the Effect of Team Composition in Honor of Kings”. In Proceedings of the Twenty-Eighth World Wide Web Conference (The Web Conf’2019, short paper), 2019.
- Wenjie Hu, Yang Yang, **Ziqliang Cheng**, Carl Yang and Ren Xiang. Time-Series Event Prediction with Evolutionary State Graph. In Proceedings of the Fourteenth International Conference on Web Search and Data Mining (WSDM’2021), 2021.
- Wenjie Hu, Yang Yang, Jianbo Wang, Xuanwen Huang and **Ziqliang Cheng**. Understanding Electricity-Theft Behavior via Multi-Source Data. In Proceedings of the Twenty-Ninth World Wide Web Conference (The Web Conf’2020, oral), 2020.
- **Ziqliang Cheng**, Yang Yang, Shuo Jiang, Wenjie Hu, Zhangchi Ying, Ziwei Chai. Time2Graph: Bridging Time Series and Graph Representation Learning via Multiple Attentions. In IEEE Transactions of Knowledge Discovery and Engineering (TKDE, *under review*).
- **Ziqliang Cheng**, Yunfeng Guo, Rong Huang and Yang Yang. “Process-crash Detection by Analogy with Social Network”. In SMP’2017 (Poster in Chinese), 2017

ACADEMIC EXPERIENCE

- Poster Presentation in AAAI’2020, New York, NY, USA (remote presentation)
- Poster Presentation in The Web Conf’2019, San Francisco, CA, USA
- Poster Presentation in SMP 2017, Beijing, China
- PC Member, reviewer, SMP 2020

PROFESSIONAL EXPERIENCE

Social Network Group, Zhejiang University - M.S. Candidate

Sep. 2018 - now

- Focus on computational social science, social network mining and machine learning
- Machine learning algorithms for time series modeling and representation
- Develop time series modeling toolkit (TSToolkit, under development).

Huayun Inc. (State Grid of China) - Machine Learning Intern *Mar. 2018 - now*

- Anomaly detection of electricity theft, and elderly user identification (The Web Conf'2020)
- Large-scale machine learning framework *Time2Graph* for time series modeling (AAAI'20)
- Scalable and robust embedding algorithm for time series sequence/shapelets

IEG, Tencent Inc. - Machine Learning Intern *Sep. 2017 - Jan. 2019*

- Mine deep knowledge from the dataset of *Honor of Kings*, a famous MOBA game.
- Explore the effect of team composition on team effectiveness by multiple measurements
- Team- and individual- level abusive behavior analysis (The Web Conf'2019)

PROJECTS

Time2Graph - Main Contributor

Machine Learning ◊ Pytorch ◊ Python

A generalized framework for time series representation algorithm *Time2Graph*, which transforms the original time series embedding problem into graph embedding, and construct the *shapelet-evolution graph* to explore the dynamics of shapelets. (AAAI'2020)

Validate the proposed framework on several public time series datasets and two real-world datasets from *State Grid* and *China Telecom*. Project Homepage: <https://github.com/petecheng/Time2Graph>.

An extension of Time2Graph that adopts graph attention mechanism to model shapelet evolutions, apply in the scenario of empty-nest elderly recognition in Jinhua, Zhejiang Province.

Online deployment for the application of electricity-theft detection and elderly recognition.(The Web Conf'2020, TKDE (under review))

Honor of Kings - Observational and Analytical Study

Statistics ◊ SQL ◊ Hadoop ◊ Python

Observational and analytical studies on over 96M games and 100M players, using SQL and paralleled programming on Hadoop clusters provided by Tencent Inc.(The Web Conf'2019)

Process-crash Detection Algorithm - Main Contributor

Machine Learning ◊ Feature Engineering ◊ Python

Process-crash detection framework by analogy with social network analysis using feature engineering and machine learning algorithms, based on large-scale datasets provided by China Telecom (SMP'2017),

SELECTED ACHIEVEMENTS AND AWARDS

- **Jiang Zhen Scholarship**, 2019
- “ZheBao-Alibaba” Student Scholarship, 2018
- Second-Class Student Scholarship in Zhejiang University (Top 7%), 2017
- **National Scholarship of China (Top 1%)**, 2016
- **First-class Student Scholarship in Zhejiang University (Top 3%)**, 2015, 2016
- Samsung Student Scholarship, 2016
- Excellent Social Work Scholarship, Excellent Student Cadres, 2016