YUEXIN BIAN

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EDUCATION

University of California San Diego *09/2021 - 06/2026*
· PhD in Electrical and Computer Engineering, Advisor: Yuanyuan Shi.

Zhejiang University *09/2017 - 06/2021*
· B.Eng. in Electrical Engineering (Automation), Overall GPA: 3.94/4.0 (top 3%).

RESEARCH WORKS

Demand Response Model Identification and Behavior Forecast with OptNet: a Gradient-based Approach submitted to e-Energy, 2022.

Yuexin Bian, Ningkun Zheng, Yang Zheng, Bolun Xu, Yuanyuan Shi.

Identifying Electrocardiogram Abnormalities Using a Handcrafted-Rule-Enhanced Neural Network accepted by IEEE Transactions on Computational Biology and Bioinformatics (TCBB), 2021.

Yuexin Bian, Jintai Chen, Xiaojun Chen, Xiaoxian Yang, Danny Z Chen, Jian Wu. Links: [package] [paper]

RESEARCH EXPERIENCE

University of California San Diego *09/2021-Present*
Advisor: Professor. Yuanyuan Shi

Working on joint routing and charging strategy for electric vehicles

Georgia Institute of Technology, Machine Learning Center *07/2020 - 10/2020*
Advisor: Professor. Yao Xie

Real-time anomaly detection from traffic sensor network data (NSF-sponsored data challenge)
· Worked to find anomalous observations in sparsely sampled traffic flow data.
· Proposed a novel ***Unsupervised Spatio-temporal Imputation Method*** for anomaly detection when the data missing pattern is extremely serious (sample rates are only 1%, 2%, 5%, 10%, 20%). Achieved best F1 performance for finding anomalous observations compared to baseline methods. Second place among teams from many universities across the US, invited to give a virtual talk in this year's workshop.

Harvard University, Harvard Business School, Marketing Group *09/2020 - 04/2021*
Advisor: Dr. Magie Cheng

Dynamics between social media behavior and influencers' reputation mechanism
· Working on a project to understand the reputation mechanisms of influencers, specifically when and how to post highly engaged brand sponsored content to milk their reputation v.s. organic content to build up their reputation.

Zhejiang & Tsinghua University, Smart Grid Operation and Optimization Lab *04/2019 - 05/2020*
Advisor: Professor. Shufeng Dong

Interactive Visualization Technology of Grid Big Data (National Innovation Research Project)
· Designed and built a grid big-data display platform, analyzed the characteristics of the grid data to be displayed, such as grid power flow data, achieved and acquired the observation needs of grid staff, designed and implemented corresponding display algorithms.

WORK EXPERIENCE

Research Intern *at* RealDoctor, China *03/2021 - 07/2021*
· Proposed a Handcrafted-Rule-enhanced Neural Network for ECG classification, which consists of a rule inference module and a deep learning module and achieve better recall scores compared with the state-of-arts.

Research Intern (Factor Analysis) *at* Baofang Private Equity, China *10/2019 - 02/2020*
· Performed factor validity analysis, analyzed and changing the factor formulation, applied the model for back-testing to increase the annualized return rate by 1.2% and effectively reduce the Sharpe rate by 2.8%.

OTHER PROJECTS

Optimization and search
· A course project implemented essential algorithms for optimization and search, including numerical optimization, stochastic search, classical search, value iteration, policy iteration, temporal difference policy evaluation, deep Q learning, etc. [Github]

HONORS

· First-Class Scholarship for Outstanding Students (top 3%)	*2018/2019*
· Bureau Member of Robot Association at Zhejiang University	*2018*
· First Prize in Physics (Theory) Innovation Competition, Zhejiang	*2018*