PEINING ZHANG

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Self-Introduction: I'm a Ph.D. student at WPI specializing in applying diffusion model for data mining. My research focus on Generative models related to diffusion model, with applications in urban settings. My combined academic and industrial experience has honed my analytical and problem-solving skills, which I've applied in diverse research projects.

EDUCATION

Worcester Polytechnic Institute, Massachusetts, U.S. 2023 – 2027(expected)

Ph.D. in Computer Science (CS)

Rutgers University, New Jersey, U.S. 2019 – 2021

M.S. in Computer Science (CS)

University of Science and Technology of China (USTC),Anhui, China 2015 – 2019

B.E. in Computer Science (CS)

INDUSTRIAL EXPERIENCE

Kuaishou Technology Co., Ltd Beijing, China Jul. 2021 – May 2023

Machine Learning Engineer Brief introduction: Developing Search Engine and E-commerce Marketing System with $1M daily costing

- **Real-time API Bidding System**: Designed and developed the Cost per Click estimation module in **Java** for a Real-time API bidding system, based on the model using **Tensorflow**, increasing user lifetime by 15%.
- **Audience Targeting Shift**: Established a series of dashboards for the new advertising audience, analyzed the reasons for the decline in new users magnitude by **sklearn** in **Python**, resulting in a 50% increase in Daily New Users without raising Customer Acquisition Cost.
- **Low-Quality Data Filtering**: Collaborated with media partners to accurately filter cheating traffic, boosting training data for landing page models by 40%. The AUC of the landing page CTR prediction model increased by 2%, and the landing page conversion rate improved by 2.8%.
- **DID Analysis Framework**: Developed a product improvement evaluation framework based on Difference-in-Difference (DID) analysis using **Jupyter** to assess the impact of product enhancements. This framework allowed us to measure the effectiveness of over 50 experiments, including those improvements that couldn't be evaluated using traditional AB testing methods.

PROJECTS EXPERIENCE

- **Text Generation with GANs**: Hosted a research project that used GANs in a Seq2Seq manner to generate text from audio features extracted by WaveNet. (USTC) 2018.02–2020.02
- **Negatively Correlated Search**: Contributed to research improving Negatively Correlated Search for real-parameter optimization, resulting in a published article. (USTC) 2017.05–2018.06
- **Text Style Transfer Algorithm**: Developed a Text Style Transfer algorithm using BERT and Spark-nlp. (Rutgers) 2019.09–2019.12

SKILLS

- Programming Languages: **Python**, **Java**, **Shell**, Matlab, C/C++,
- Platform: **Hive SQL**, **Hadoop**, **Redis**, Kafka, Flask, Spark, MongoDB
- AI: **Tensorflow**, **Pytorch**, Keras, OpenCV, Scikit-learn

MISCELLANEOUS

- Publication: "Negatively Correlated Search with Asymmetry for Real-Parameter Optimization Problems", *Journal of Computer Research and Development*, 2019