# Jiahang JIANG

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# Research Interest

Interpretable Machine Learning, Sequential Recommendation, Dataset Distillation, Contextual Bandit

#### EDUCATION

#### Hong Kong University of Science and Technology

Ph.D. Candidate in Data Science and Analytics, Academy of Interdisciplinary Studies

Research Interests in Interpretable ML, Sequential Recommendation, Dataset Distillation

# Hong Kong University of Science and Technology

M.Sc. in Big Data Technology, School of Engineering

Nanjing University of Science and Technology

**B.Eng.** in Intelligent Science and Technology, School of Computer Science and Engineering

GPA:3.7/4.0 (Ranking:2/74)

GPA: 3.8/4.3 Sep. 2021 - Present

GPA:3.8/4.3

# Sep. 2016 - Jun. 2020

Sep. 2020 - Jun. 2021

### Preprints and Publications

(\*: These authors contributed equally to the manuscript.)

- [1] Jiahang JIANG\*, Liang Ding\*, Tianyang Hu\*, Donghao Li\*, Wenjia Wang\*, Yuan Yao\*. "Random Smoothing Regularization in Kernel Gradient Descent Learning." Journal of Machine Learning Research 25.284 (2024): 1-88.
- [2] Jiahang JIANG\*, Linghua TANG\*, Mudi DUAN, Mingchao LI, Songtao YUAN, Qiang CHEN. "Automated detection algorithm of macular fovea in SD-OCT images." in Proceedings of the 17th China Conference on Machine Learning, pages 43, 2019.
- [3] Jiahang JIANG, Wenjia WANG, Yun ZHANG, Guilin LI. "MDR: Boosting Sequential Recommendations with Dual-Domain Sufficient Embedding." Submitted to IEEE International Conference on Data Mining.
- [4] Jiahang JIANG, Wenjia WANG. "Understanding Self-Supervised Dataset Distillation via Alignment and Uniformity." To be Submitted to International Conference on Learning Representations.
- [5] Qingwen ZHANG, Wenjia WANG, Jiahang JIANG. "Uniform Fairness-aware Contextual Bandits." To be Submitted to Journal of Machine Learning Research.

#### Internship

#### Weixin Group, Tencent

Shenzhen, China

Research Intern in WeChat Pay

Aug. 2024 - Mar. 2025

- Developed advanced user behavior sequence modeling for commercial transactions (patent-pending), improving fraud detection by over 20% in top 0.01% recall rate through online and offline evaluations.
- Fine-tuned large language models for payment data analysis, enabling characterization of fraud-induced user
- Implemented advanced feature engineering for Key Account merchants, achieving over 92% accuracy in complaint category classification.

# New Energy Vehicle Research Institute, YueBoo Power System

Nanjing, China

Research Intern in Intelligent Driving and Perception Research Group

Jul. 2020 - Aug. 2020

Developed and optimized object detection algorithms for autonomous driving.

#### Teaching Assistant

DSAA5009 Deep Learning in Data Science (Spring 2023)

HKUST

UFUG1105 Honors Calculus I (Fall 2023)

HKUST

# SKILLS

Language: English (Fluent), Mandarin (Native)

**Programming Languages:** Python, SQL, C/C++, Matlab, R

Machine Learning Frameworks: TensorFlow, PyTorch

Big Data Tools: PySpark, Hadoop Backend Frameworks: Django

#### AWARDS

International Chinese Statistical Association Honorable Mention Poster Award, July 2023

Outstanding Graduate of Nanjing University of Science and Technology, June 2020

Third Prize in 5th "Internet+" Entrepreneurship and Innovation Competition, Sep 2019

Third Prize in 10th "Lanqiao Cup" C/C++ Programme Design Match, Mar 2019

Merit Student of Nanjing University of Science and Technology, Oct 2018/2019

First Prize Scholarship of Academic Year, Sep 2017/2019/2020