

# Jiahang JIANG

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## RESEARCH INTEREST

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

## EDUCATION

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**Hong Kong University of Science and Technology** GPA: 3.8/4.3  
*Ph.D. Candidate* in Data Science and Analytics, Academy of Interdisciplinary Studies Sep. 2021 - Present  
*Research Interests* in Interpretable Machine Learning, Sequential Recommendation, Dataset Distillation

**Hong Kong University of Science and Technology** GPA: 3.8/4.3  
*M.Sc.* in Big Data Technology, School of Engineering Sep. 2020 - Jun. 2021

**Nanjing University of Science and Technology** GPA: 3.7/4.0 (Ranking: 2/74)  
*B.Eng.* in Intelligent Science and Technology, School of Computer Science and Engineering Sep. 2016 - Jun. 2020

## PREPRINTS AND PUBLICATIONS

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(\*: 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

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**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 behaviors.
- 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

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DSAA5009 Deep Learning in Data Science (Spring 2023) HKUST

UFUG1105 Honors Calculus I (Fall 2023) HKUST

## SKILLS

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**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

**Visualization Tools:** Tableau

## AWARDS

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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