Han Lin

CONTACT

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INTERESTS

Generative models, multimodal learning, LLMs, robotics learning
Theory-grounded algorithms for efficient machine learning

EDUCATION

University of North Carolina at Chapel Hill   2023 - Exp. 2028
Ph.D. in Computer Science
MURGe-Lab. Advised by Prof. Mohit Bansal

Columbia University   2021 - 2023
M.S. in Computer Science (Machine Learning Track)
DVMM Lab. Advised by Prof. Shih-Fu Chang
ROAM Lab. Advised by Prof. Matei Ciocarlie, and Prof. Shuran Song

Columbia University   2018 - 2020
M.S. in Financial Engineering

Central University of Finance and Economics   2014 - 2018
B.S. in Financial Engineering

PREPRINTS

1. **DiagrammerGPT: Generating Open-Domain, Open-Platform Diagrams via LLM Planning** [arxiv|project page]
Abhay Zala, **Han Lin**, Jaemin Cho, Mohit Bansal, 2023

2. **VideoDirectorGPT: Consistent Multi-scene Video Generation via LLM-Guided Planning** [arxiv|project page]
Han Lin, Abhay Zala, Jaemin Cho, Mohit Bansal, 2023

3. **Graph Kernel Attention Transformers** [paper|github]
Krzysztof Choromanski*, **Han Lin***, Haoxian Chen*, Jack Parker-Holder, 2021

PUBLICATIONS

1. **Efficient Graph Field Integrators Meet Point Clouds** [arxiv|github]
Krzysztof Choromanski*, Arijit Sehanobish*, **Han Lin***, Yunfan Zhao*, Eli Berger, Alvin Pan, Tetiana Parshakova, Tianyi Zhang, David Watkins, Valerii Likhosherstov, Somnath Basu Roy Chowdhury, Avinava Dubey, Deepali Jain, Tamas Sarlos, Snigdha Chaturvedi, Adrian Weller
In International Conference on Machine Learning (**ICML**), 2023

2. **Supervised Masked Knowledge Distillation for Few-Shot Transformers**
[arxiv|github]
Han Lin*, Guangxing Han*, Jiawei Ma, Shiyuan Huang, Xudong Lin, Shih-Fu Chang
In Conference on Computer Vision and Pattern Recognition (**CVPR**), 2023

3. **Active Tactile Exploration for 3D Object Recognition** [arxiv|project page]
Jingxi Xu*, **Han Lin***, Shuran Song, Matei Ciocarlie
In IEEE International Conference on Robotics and Automation (**ICRA**), 2023

4. **From block-Toeplitz matrices to differential equations on graphs: towards a general theory for scalable masked Transformers** [arxiv|github]
Krzysztof Choromanski*, **Han Lin***, Haoxian Chen*, Tianyi Zhang, Arijit Sehanobish, Valerii Likhosherstov, Jack Parker-Holder, Tamas Sarlos, Adrian Weller, Thomas Weingarten
In International Conference on Machine Learning (**ICML**), 2022

5. **Hybrid Random Features** [arxiv|github]

Krzysztof Choromanski*, **Han Lin***, Haoxian Chen*, Yuanzhe Ma*, Arijit Sehanobish*, Deepali Jain, Michael Ryoo, Jake Varley, Andy Zeng, Valerii Likhosherstov, Dmitry Kalashnikov, Vikas Sindhwani, Adrian Weller

In International Conference on Learning Representations (**ICLR**), 2022

6. **Demystifying Orthogonal Monte Carlo and Beyond** [arxiv|github]

Han Lin*, Haoxian Chen*, Tianyi Zhang, Clement Laroche, Krzysztof Choromanski

In Advances in Neural Information Processing Systems (**NeurIPS**), 2020

* Co-First Authors, Equal Contribution

EXPERIENCE	**UNC MURGe-Lab**	2023 - now
	Research Assistant, Advised by Prof. Mohit Bansal	
	• Text-to-video generation, multimodal learning, and LLMs	
	China Merchant Securities	2020 - 2021
	Option Market Making Quant Trader, Full Time	
	• Commodity options and futures trading and daily P&L attribution	
PROGRAM	Cornell, Maryland, Max Planck Pre-doctoral Research School	2022
SKILLS	Python, C/C++, MATLAB, R, MySQL, LaTeX	
	PyTorch, TensorFlow, Keras, Scikit-learn	
TEACHING	COMS 4231 Analysis of Algorithms	Fall 2022
	COMS 4732 Computer Vision II: Learning	Spring 2022
	COMS 4721 Machine Learning for Data Science	Spring 2022
	QMSS 5073 Machine Learning for Social Science	Fall 2021
	IEOR 4007 Optimization Models & Methods for FE	Fall 2019
	IEOR 4418 Transportation Analytics & Logistics	Spring 2019
SERVICES	**Reviewer:** ICLR 2024, ICML 2022, 2023; NeurIPS 2022, 2023	
	Volunteer: Robotics: Science and Systems (RSS) 2022	