

Xingwei Qu

RESEARCH ASSISTANT AT HKUST

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Education

University of Manchester

Oxford Rd, Manchester M13 9PL,
UK

PHD IN COMPUTER SCIENCE

Start at Sep. 2024

- Awarded a full departmental studentship.
- Advisor: Prof. Chenghua Lin

Technical University of Munich

Arcisstraße 21 Munich, Germany

MSC. IN ELECTRICAL ENGINEERING AND INFORMATION TECHNOLOGY

Mar. 2017 - July 2020

- First-Class Honour
- Advisor: Prof. Dr. Daniel Cremers

Beihang University

37 Xueyuan Road, Haidian
District, Beijing, P.R. China

BS IN AUTOMATION SCIENCE

Sep. 2011 - July 2015

- Advisor: Prof. Haibin Duan

Professional Experience

- 2018-2019 **Master Thesis Student**, Artisense
- 2020-2021 **Research Engineer**, ByteDance Inc.
- 2021-2023 **Senior Research Engineer**, XiaoPeng Inc.
- 2023-2024 **Research Assistant**, Hong Kong University of Science and Technology

Research& Working Experience

HKUST

China

ADVISOR: DR. JIE FU & PROF. YIKE GUO

Sep. 2023 - Present

- Leading the development of **HKLLM**: A Fully Transparent Open-Source Large Language Models project.
- Serve as the Pretraining Team Leader and a core contributor, driving advancements in AI transparency and accessibility.

XiaoPeng Inc.

China

ADVISORS: PATRICK LIU (DIRECTOR)

2021-2023

- Spearheaded the **Xpilot** project: A City Navigation Guided Pilot system, enhancing urban mobility solutions.
- Delivered a cutting-edge 3D object detection model and designed an Auto-Labeling system, contributing to the project's success.

ByteDance Inc.

China

ADVISORS: YONGJIE ZHANG (DIRECTOR)

2020-2021

- Developed **VPS**: A Visual Positioning System, integrating advanced localization features into TikTok.
- Led the implementation of the Online Localization System, significantly enhancing user experience on the platform..
- Cooperating with

Artisense

Germany

ADVISORS: DANIEL CREMERS (CSO)

2020-2021

- Developed a Visual and Visual Inertial SLAM for Direct Sparse Odometry.

Publications

TECHNICAL REPORT

Ge Zhang*, **Scott Qu***, Jiaheng Liu*, Chenchen Zhang, Chenghua Lin, Chou Leuang Yu, Danny Pan, Esther Cheng, Jie Liu, Qunshu Lin, Raven Yuan, Tuney Zheng, Wei Pang, Xinrun Du, Yiming Liang, Yinghao Ma, Yizhi Li, Ziyang Ma, Bill Lin, Emmanouil Benetos, Huan Yang, Junting Zhou, Kaijing Ma, Minghao Liu, Morry Niu, Noah Wang, Quehry Que, Ruibo Liu, Sine Liu, Shawn Guo, Soren Gao, Wangchunshu Zhou, Xinyue Zhang, Yizhi Zhou, Yubo Wang, Yuelin Bai, Yuhan Zhang, Yuxiang Zhang, Zenith Wang, Zhenzhu Yang, Zijian Zhao, Jiajun Zhang, Wanli Ouyang, Wenhao Huang, Wenhui Chen Map-neo: Highly capable and transparent bilingual large language model series

PUBLISHED

* **Denote Equal Contribution**

Xiang Yue*, **Xingwei Qu**, Ge Zhang, Yao Fu, Wenhao Huang, Huan Sun, Yu Su, Wenhui Chen* MAMMOTH: Building Math Generalist Models Through Hybrid Instruction Tuning ICLR2024 Spotlight

Yujie Shao*, Xinrong Yao*, **Xingwei Qu***, Chenghua Lin, Shi Wang, Wenhao Huang, Ge Zhang, Jie Fu CMDAG: A Chinese Metaphor Dataset with Annotated Grounds as CoT for Boosting Metaphor Generation Coling2024

Xinrun Du, Zhouliang Yu, Songyang Gao, Ding Pan, Yuyang Cheng, Ziyang Ma, Ruibin Yuan, **Xingwei Qu**, Jiaheng Liu, Tianyu Zheng, Xinchun Luo, Guorui Zhou, Binhang Yuan, Wenhui Chen, Jie Fu, Ge Zhang Chinese tiny llm: Pretraining a chinese-centric large language model COLM2024

Tianyu Zheng, Ge Zhang, **Xingwei Qu**, Ming Kuang, Wenhao Huang and Zhaofeng He MORE-3S: Multimodal-based Offline Reinforcement Learning with Shared Semantic Spaces Coling2024

Xingwei Qu, Haibin Duan Three Dimensional Trajectory Planning of Unmanned Aerial Vehicles Based on Quantum Differential Search CCC2014

Zied Tayeb, Juri Fedjaev, Nejla Ghaboosi, Christoph Richter, Lukas Everding, **Xingwei Qu**, Yingyu Wu, Gordon Cheng, Jörg Conradt Validating Deep Neural Networks for Online Decoding of Motor Imagery Movements from EEG Signals CCPE - Sensors

Jincan Zhang, Zhenbo Song, Jianfeng Lu, **Xingwei Qu**, Zhaoxin Fan Multi-Modal Attention Network for End-to-End Steering Control PRCV2022

UNDER REVIEW

Tianyu Zheng, Shuyue Guo, **Xingwei Qu**, Jiawei Guo, Weixu Zhang, Xinrun Du, Chenghua Lin, Wenhao Huang, Wenhui Chen, Jie Fu, Ge Zhang Kun: Answer Polishment for Chinese Self-Alignment with Instruction Back-Translation ACL2024

Haoran Que, Jiaheng Liu, Ge Zhang, Chenchen Zhang, **Xingwei Qu**, Yinghao Ma, Feiyu Duan, Zhiqi Bai, Jiakai Wang, Yuanxing Zhang, Xu Tan, Jie Fu, Wenbo Su, Jiamang Wang, Lin Qu, Bo Zheng D-CPT Law: Domain-specific Continual Pre-Training Scaling Law for Large Language Models NeurIPS 2025

Xingwei Qu, Yuelin Bai, Yinghao Ma, Ziya Zhou, Ka Man Lo, Jiaheng Liu, Ruibin Yuan, Lejun Min, Xueling Liu, Tianyu Zhang, Xinrun Du, Shuyue Guo, Yiming Liang, Yizhi Li, Shangda Wu, Junting Zhou, Tianyu Zheng, Ziyang Ma, Fengze Han, Wei Xue, Gus Xia, Emmanouil Benetos, Xiang Yue, Chenghua Lin, Xu Tan, Stephen W Huang, Wenhui Chen, Jie Fu, Ge Zhang Mupt: A generative symbolic music pretrained transformer EMNLP2025

Xingwei Qu*, Yiming Liang*, Yucheng Wang, Tianyu Zheng, Tommy Yue, Lei Ma, Stephen W. Huang, Jiajun Zhang, Wenhui Chen, Chengqin Zong, Chenghua Lin, Jie Fu, Ge Zhang DEEP-ICL: Definition-Enriched Experts for Language Model In-Context Learning ACL2024

Ge Zhang, Xinrun Du, Bei Chen, Yiming Liang, Tongxu Luo, Tianyu Zheng, Kang Zhu, Yuyang Cheng, Chunpu Xu, Shuyue Guo, Haoran Zhang, **Xingwei Qu**, Junjie Wang, Ruibin Yuan, Yizhi Li, Zekun Wang, Yudong Liu, Yu-Hsuan Tsai, Fengji Zhang, Chenghua Lin, Wenhao Huang, Wenhui Chen, Jie Fu CMMU: A Chinese Massive Multi-discipline Multimodal Understanding Benchmark

Yizhi Li*, Ge Zhang*, **Xingwei Qu***, Jiali Li, Zhaoqun Li, Zekun Wang, Hao Li, Ruibin Yuan, Yinghao Ma, Kai Zhang, Wangchunshu Zhou, Yiming Liang, Lei Zhang, Lei Ma, Jiajun Zhang, Zuowen Li, Stephen W Huang, Chenghua Lin, Wenhui Chen, Jie Fu CIF-Bench: A Chinese Instruction-Following Benchmark for Evaluating the Generalizability of Large Language Models ACL2024

IN PREP

*Jingbang Chen**, *Yian Wang**, ***Xingwei Qu***, *Shuangjia Zheng*, *Yaodong Yang*, *Hao Dong*, *Jie Fu* Mixup-Augmented Meta-Learning for Sample-Efficient Fine-Tuning of Protein Simulators AAAI2024

Awards

2011-2015 **Beihang University "FengRu Cup" Technology competition, The Second Prize,**
Mathematical Contest in Modeling, The Meritorious Winner,
The first prize of China High School Biology Olympiad (9th in Heilongjiang Province),