

# Dr. Xiao (Brandon) Han

SENIOR AI RESEARCH SCIENTIST @ META

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## Employment

### META (Facebook UK Limited)

SENIOR AI RESEARCH SCIENTIST

London, UK  
Jul. 2025 - Present

- Team: Monetization Generative AI (MGenAI) London
- Developing multi-scene video generation models for Ads
- Managing and advising Computer Science Research interns

AI RESEARCH SCIENTIST

Oct. 2023 - Jul. 2025

- Team: Monetization Generative AI (MGenAI) London
- Developing creative Ads with Generative AI (diffusion models + LLMs/VLMs)
- Collaborating and increasing productivity on existing AI projects
- Managing and advising AI Research Scientist interns

### University of Surrey

POSTGRADUATE RESEARCHER

Guildford, UK  
Jan. 2021 - Oct. 2023

- Project: Multi-modal deep learning, focusing on generative modeling and representation learning
- Funding: University of Surrey FEPS/iFlyTek Ph.D. Studentship with tuition fees waiver and 36 months maintenance
- Published 6 top-tier publications and presented at international academic conferences
- Demonstrated in undergraduate and postgraduate courses

### PixelShift.AI

COMPUTER VISION ALGORITHM INTERN

Shanghai, China  
May 2020 - Sep. 2020

- Mentors: Zhiming Ma and Meng Zhang
- Project: Immersive AR application (Google MediaPipe) and deployment of generative models (TFLite)

## Education

### University of Surrey

DOCTOR OF PHILOSOPHY (PH.D.)

Guildford, UK  
Jan. 2021 - Jul. 2024

- Major in "Vision, Speech and Signal Processing" at Centre for Vision, Speech and Signal Processing (CVSSP)
- Supervisors: Prof. Tao Xiang (principal) and Prof. Yi-Zhe Song
- Thesis: Fine-Grained Vision-Language Learning 📄
- Examiners: Prof. Andrea Vedaldi (University of Oxford & Meta) and Dr. Anjan Dutta (internal)

### Zhejiang University (ZJU)

BACHELOR OF ENGINEERING (BENG)

Hangzhou, China  
Sep. 2016 - Jun. 2020

- Major in "Information Engineering" at College of Information Science and Electronic Engineering (ISEE)
- Cumulative GPA: 3.92 / 4.00 (88.13 / 100), Third-year GPA: 3.94 / 4.00 (89.46 / 100)
- Thesis Title: Deep Learning-Based Features Prediction for Mass Spectrometry of Protein

### Non-Degree Academic Experiences:

2020 Winter	Visiting student with Dr. Li Zhang @ ZVG, Fudan University (FDU)	Shanghai, China
2019-2020	Research assistant with Dr. Changbin Yu @ AiR, Westlake University	Hangzhou, China
2019 Summer	Visiting student with Prof. L. Jay Guo @ EECS, University of Michigan (UMich)	Ann Arbor, MI, USA
2018 Summer	Exchange student with iESR program @ University of Notre Dame (ND)	South Bend, IN, USA

## Research Interests

I am broadly interested in the field of Deep Learning. My current research interest lies in the intersection between Computer Vision and Natural Language Processing (*i.e.*, V+L). My research goal is to build multi-modal AI systems that can be used in real-world applications (*e.g.*, e-commerce, and metaverse). My expertise includes but is not limited to V+L **representation learning** and (parameter-efficient) **adaptation**, discriminative tasks (*e.g.*, uni-modal/cross-modal/compositional **retrieval**), generative tasks (*e.g.*, image **captioning**, text-based/guided **2D/3D** contents **generation/editing**), and some specific tasks (*e.g.*, person ReID).

Publications

Google Scholar (\* Equal contribution, † Corresponding author)

Conference

**Learning Flow Field in Attention for Controllable Person Image Generation** CVPR 2025  
Zijian Zhou, Shikun Liu, **Xiao Han**, Haozhe Liu, Kam Woh Ng, Tian Xie, Yuren Cong, Hang Li, Mengmeng Xu, Juan-Manuel Perez-Rua, Aditya Patel, Tao Xiang, Miaoqing Shi, Sen He Jun. 2025

**HeadSculpt: Crafting 3D Head Avatars with Text** NeurIPS 2023  
**Xiao Han\***, Yukang Cao\*, Kai Han, Xiatian Zhu, Jiankang Deng, Yi-Zhe Song, Tao Xiang†, Kwan-Yee K. Wong† Dec. 2023

**Controllable Person Image Synthesis with Pose-Constrained Latent Diffusion** ICCV 2023  
**Xiao Han**, Jiankang Deng, Xiatian Zhu, Yi-Zhe Song, Tao Xiang Oct. 2023

**FAME-ViL: Multi-Tasking Vision-Language Model for Heterogeneous Fashion Tasks (Highlight, Top 2.5%)** CVPR 2023  
**Xiao Han**, Xiatian Zhu, Licheng Yu, Li Zhang, Yi-Zhe Song, Tao Xiang Jun. 2023

**FashionViL: Fashion-Focused Vision-and-Language Representation Learning** ECCV 2022  
**Xiao Han**, Licheng Yu, Xiatian Zhu, Li Zhang, Yi-Zhe Song, Tao Xiang Oct. 2022

**UIGR: Unified Interactive Garment Retrieval** CVPRW 2022  
**Xiao Han**, Sen He, Li Zhang, Yi-Zhe Song, Tao Xiang Jun. 2022

**Text-Based Person Search with Limited Data** BMVC 2021  
**Xiao Han**, Sen He, Li Zhang, Tao Xiang Nov. 2021

Journal

**MarDini: Masked Auto-regressive Diffusion for Video Generation at Scale** TMLR  
Haozhe Liu, Zijian Zhou\*, Shikun Liu\*, Mengmeng Xu, Yanping Xie, **Xiao Han**, Juan C. Pérez, Ding Liu, Kumara Kahatapitiya, Mengling Jia, Jui-Chieh Wu, Sen He, Tao Xiang, Juergen Schmidhuber, Juan-Manuel Pérez-Rúa Apr. 2025

**Inverse Design of Metasurface Optical Filters using Deep Neural Network with High Degrees of Freedom** InfoMat  
**Xiao Han\***, Ziyang Fan\*, Zeyang Liu\*, Chao Li, and L. Jay Guo Jun. 2020

Preprint

**Large-Scale Product Retrieval with Weakly Supervised Representation Learning** arXiv  
**Xiao Han\***, Kam Woh Ng\*, Sauradip Nag, Zhiyu Qu Aug. 2022

Honors & Awards

2022	2 <sup>nd</sup> Place, eBay eProduct Visual Search Challenge - FGVC9 (CVPR2022)	eBay, USA
2021-2024	Faculty of Engineering and Physical Sciences/iFlytek Scholarship	University of Surrey/iFlytek, UK
2019	Chunzhen International Exchange Scholarship	Zhejiang University, China
2017-2019	3 <sup>rd</sup> Prize, Academic & Outstanding Student Scholarship	Zhejiang University, China
2018	Yongping Scholarship	Zhejiang University, China
2018	3 <sup>rd</sup> Prize, National Talent Training Base Scholarship	Zhejiang University, China
2018	Honorable Mention Prize, Mathematical Contest in Modeling (MCM)	COMAP, USA
2017	3 <sup>rd</sup> Prize, Physics Innovation Competition in Zhejiang Province (Theory Part)	Zhejiang Physical Society, China

Academic Services

Conference reviewer (24 papers reviewed)

- Association for Computational Linguistics Rolling Review (ARR)
- International Conference on Learning Representations (ICLR) 2024, 2025 (×2)
- Conference on Neural Information Processing Systems (NeurIPS) 2023 (×3)
- IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) 2022, 2023, 2024 (×3)
- International Conference on Computer Vision (ICCV) 2023 (×3)
- European Conference on Computer Vision (ECCV) 2022, 2024 (×3)
- AAAI Conference on Artificial Intelligence (AAAI) 2023, 2024 (×8)
- CVPR Workshop on Computer Vision for Fashion, Art, and Design (CVFAD) 2023 (×1)
- IEEE International Conference on Multimedia and Expo (ICME) 2022 (×1)

Journal reviewer (5 papers reviewed)

- Computer Graphics Forum (CFG) (×1)
- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) (×2)
- IEEE Transactions on Neural Networks and Learning Systems (TNNLS) (×1)
- IEEE Transactions on Circuits and Systems for Video Technology (TCSVT) (×1)





Teaching assistant / Demonstrator @ University of Surrey

- EEEM071 (2023 Spring) - Advanced Topics in Computer Vision and Deep Learning (under Prof. Yi-Zhe Song and Dr. Xiatian Zhu)
- Responsible for the final coursework design (Vehicle ReID) and lab tutorial preparation (fundamentals for NumPy/PyTorch)
- Responsible for demonstrating in lab sessions with 145+ PG/T students having mixed backgrounds
- Responsible for marking the coursework reports

Project tutor @ University of Surrey

- EEEM004 (2023 Spring) - 60 Credit Standard Project (under Dr. Xiatian Zhu)
- Responsible for guiding PG/T final projects “Zero-/Few-shot learning with language supervision”

Skills

Programming Languages		Python, C/C++, MATLAB, $\LaTeX$ , Verilog, JavaScript/TypeScript, HTML/CSS
Frameworks and Tools		PyTorch, PyTorch Lightning, TensorFlow, Git, Docker, W&B
Codebases		Meta AI MMF, HuggingFace Pipeline (e.g., Transformers/Diffusers), Google MediaPipe, timm
Languages		普通话 Mandarin (native), English (fluent), 한국어 Korean (beginner)

References

Will be provided upon request