

Xiao (Brandon) Han

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Research Interests

Computer Vision with Deep Learning, Multimodal Deep Learning, Vision and Language Pre-training,
Fine-grained Image Retrieval, Cross-modal Image Retrieval, Compositional Image Retrieval

Education

University of Surrey

PH.D. STUDENT

- Major in Vision and Signal Processing at Centre for Vision, Speech and Signal Processing (CVSSP)
- Supervisors: Prof. Tao Xiang and Prof. Yi-Zhe Song
- Thesis Topic: Fine-grained Multimodal Deep Learning

Guildford, UK
Jan. 2021 - Present

Zhejiang University

BACHELOR OF ENGINEERING

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

Hangzhou, China
Sep. 2016 - Jun. 2020

Non-Degree Academic Experiences:

2020	Visiting student with Dr. Li Zhang at ZVG, Fudan University
2019	Research assistant with Dr. Changbin Yu at AiR, Westlake University
2019	Visiting student with Prof. L. Jay Guo at EECS, University of Michigan
2018	Exchange student with iESR program at University of Notre Dame

Shanghai, China
Hangzhou, China
Ann Arbor, MI, USA
South Bend, IN, USA

Work Experiences

PixelShift.AI

COMPUTER VISION ALGORITHM INTERN

- Mentors: Zhiming Ma and Meng Zhang
- Project: Immersive AR application and deployment of generative models

Shanghai, China
May. 2020 - Sep. 2020

Publications

Conference

FashionViL: Fashion-Focused Vision-and-Language Representation Learning

Xiao Han, Licheng Yu, Xiatian Zhu, Li Zhang, Yi-Zhe Song, Tao Xiang

ECCV 2022
Oct. 2022

UIGR: Unified Interactive Garment Retrieval

Xiao Han, Sen He, Li Zhang, Yi-Zhe Song, Tao Xiang

CVPRW 2022
Jun. 2022

Text-Based Person Search with Limited Data

Xiao Han, Sen He, Li Zhang, Tao Xiang

BMCV 2021
Nov. 2021

Preprint

Large-Scale Product Retrieval with Weakly Supervised Representation Learning

Xiao Han*, Kam Woh Ng*, Sauradip Nag, Zhiyu Qu

arXiv
Aug. 2022

Journal

Inverse Design of Metasurface Optical Filters using Deep Neural Network with High Degrees of Freedom

Xiao Han*, Ziyang Fan*, Zeyang Liu*, Chao Li, and L. Jay Guo

InfoMat
Jun. 2020

Open-sourced Projects

eBayChallenge: A modularized codebase for large-scale product retrieval (based on PyTorch Lightning and Hydra)

- <https://github.com/01BB01/eBayChallenge>
- Implementation of our solution for *eBay eProduct Visual Search Challenge - FGVC9 (CVPR2022)*

FashionViL: A codebase for fashion-related vision-and-language research (based on Meta AI MMF)

- <https://github.com/BrandonHanx/mmf>
- Implementation and extension of our paper *FashionViL: Fashion-Focused Vision-and-Language Representation Learning*

CompFashion: A modularized codebase for text-guided image retrieval (based on vanilla PyTorch)

- <https://github.com/BrandonHanx/CompFashion>
- Implementation and extension of our paper *UIGR: Unified Interactive Garment Retrieval*

TextRelD: A modularized codebase for text-based person search (based on vanilla PyTorch)

- <https://github.com/BrandonHanx/TextRelD>
- Implementation and extension of our paper *Text-Based Person Search with Limited Data*

Honors & Awards

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

Services

Conference reviewer

- AAAI Conference on Artificial Intelligence (AAAI) 2023
- European Conference on Computer Vision (ECCV) 2022
- ACM International Conference on Multimedia (ACM MM) 2022
- IEEE International Conference on Multimedia and Expo (ICME) 2022

Journal reviewer

- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)

Skills

Programming Languages	Python, C/C++, MATLAB, LaTeX, Verilog, JS/TS, HTML/CSS
Frameworks and Tools	PyTorch, PyTorch Lightning, TensorFlow, Git, Docker
Languages	Chinese (native language), English (IELTS: 6.5), Korean (primary)