Xiao (Brandon) Han

Desk 01, 01BB01, University of Surrey, Guildford, Surrey, GU2 7XH, United Kingdom

 (+44) 075-2998-9025 | xiao.han@surrey.ac.uk | Homepage | GitHub | LinkedIn | GoogleScholar

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 — *Guildford, UK*
PH.D. STUDENT — *Jan. 2021 - Present*
- 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

Zhejiang University — *Hangzhou, China*
BACHELOR OF ENGINEERING — *Sep. 2016 - Jun. 2020*
- 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

Non-Degree Academic Experiences:

2020	Visiting student with Dr. Li Zhang at ZVG, Fudan University	*Shanghai, China*
2019	Research assistant with Dr. Changbin Yu at AiR, Westlake University	*Hangzhou, China*
2019	Visiting student with Prof. L. Jay Guo at EECS, University of Michigan	*Ann Arbor, MI, USA*
2018	Exchange student with iESR program at University of Notre Dame	*South Bend, IN, USA*

Work Experiences

PixelShift.AI — *Shanghai, China*
COMPUTER VISION ALGORITHM INTERN — *May. 2020 - Sep. 2020*
- Mentors : Zhiming Ma and Meng Zhang
- Project : Immersive AR application and deployment of generative models

Publications

Conference

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*

Preprint

Large-Scale Product Retrieval with Weakly Supervised Representation Learning — *arXiv*
Xiao Han*, Kam Woh Ng*, Sauradip Nag, Zhiyu Qu, Xiatian Zhu, Li Zhang, Yi-Zhe Song, Tao Xiang — *Jul. 2022*

Journal

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*

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*

TextReID: A modularized codebase for text-based person search (based on vanilla PyTorch)
- https://github.com/BrandonHanx/TextReID
- Implementation and extension of our paper *Text-Based Person Search with Limited Data*

Honors & Awards

2022	2nd 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	3rd Prize, Academic & Outstanding Student Scholarship	*Zhejiang University, China*
2018	Yongping Scholarship	*Zhejiang University, China*
2018	3rd Prize, National Talent Training Base Scholarship	*Zhejiang University, China*
2018	Honorable Mention Prize, Mathematical Contest in Modeling (MCM)	*COMAP, USA*
2017	3rd Prize, Physics Innovation Competition in Zhejiang Province (Theory Part)	*Zhejiang Physical Society, China*

Services

Conference reviewer
- 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, TensorFlow, Git, Docker
Languages	Chinese (native language), English (IELTS: 6.5), Korean (primary)