

Junlin Han

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EDUCATION

University of Oxford

PhD (Dphil) in Computer Vision

Supervised by [Prof. Philip Torr](#)

01.2024 – ongoing

Oxford, UK

Australian National University

Bachelor of Information Technology (Honours)

GPA: 3.95/4.00

02.2019 – 07.2023

Canberra, Australia

First-Class Honours

RESEARCH INTERESTS

My research focus on computer vision, deep learning, and artificial intelligence, with a particular concentration on *achieving human-like machine intelligence through studying data*. This entails exploring:

- (1) **Generation** and **manipulation** of 2D, 3D, and 4D visual data,
- (2) Use **augmented, synthetic, and distilled** data for training machine learning systems,
- (3) Understand the **role of data** through cognitive perspectives.

I am also interested in extending my research to other scientific domains, such as exploring the applications of AI in the field of health and biology.

EXPERIENCE

PhD Student Researcher

Facebook AI Research (FAIR), Meta

Host: [Dr. Filippos Kokkinos](#)

Generative models for 3D creation

10.2023 – ongoing

London, UK

Research Intern

AIML, University of Adelaide

Advisor: [Prof. Ian Reid](#)

Topics: Data-centric AI, memorability

12.2021 – 05.2023

Adelaide, Australia

Research Student

Data61-CSIRO & Australian National University

Advisors: [Dr. Lars Petersson](#) and [Prof. Hongdong Li](#)

Topics: Generative models, self-supervised learning

08.2020 – 05.2023

Canberra, Australia

SELECTED PUBLICATIONS (AS LEADING AUTHOR)

See my [webpage](#) for full publications, codes, datasets, and project pages, etc.

What Images are More Memorable to Machines?

Junlin Han, Huangying Zhan, Jie Hong, Pengfei Fang, Hongdong Li, Lars Petersson, Ian Reid

Preprint arXiv:2211.07625

You Only Cut Once: Boosting Data Augmentation with a Single Cut

Junlin Han, Pengfei Fang, Weihao Li, Jie Hong, Ali Armin, Ian Reid, Lars Petersson, Hongdong Li

International Conference on Machine Learning (ICML), 2022

Blind Image Decomposition

Junlin Han, Weihao Li, Pengfei Fang, Chunyi Sun, Jie Hong, Ali Armin, Lars Petersson, Hongdong Li

European Conference on Computer Vision (ECCV), 2022

PROFESSIONAL ACTIVITIES

Conference review: CVPR 2022 2023 2024, NeurIPS 2022 2023, ICML 2022, ECCV 2022, ICLR 2023 2024, ICCV 2023, ACCV 2022, AAAI 2023, BMVC 2023, WACV 2024

Journal review: Transactions on Image Processing (TIP), Transactions on Geoscience and Remote Sensing (TGRS), Pattern Recognition, Neurocomputing, Journal of Oceanic Engineering (JOE)

Workshop review: NTIRE (CVPRW) 2021

TECHNICAL SKILLS

Programming Languages: Proficient in Python, MATLAB

Familiar with Java, SQL, HTML/CSS, R, Haskell, Assembly (ARMV7)

Developer Tools: Git, Latex, VS Code, Visual Studio, PyCharm, IntelliJ, Jupyter Notebook

Libraries: PyTorch, NumPy

AWARDS

Top Reviewer <i>NeurIPS (Conference on Neural Information Processing Systems)</i>	2022
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Second Best Presentation Award <i>AIM (Active Integrated Matter) Conference</i>	2021
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Top-up Scholarship <i>for research work at Data61-CSIRO</i>	2021
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Undergraduate Vacation Scholarship <i>for summer research at Data61-CSIRO</i>	2020
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FULL PUBLICATIONS

13. 3D-GPT: Procedural 3D Modeling with Large Language Models
Chunyi Sun*, **Junlin Han***, Weijian Deng, Xinlong Wang, Zishan Qin, Stephen Gould
Preprint arXiv:2310.12945
12. NeRFEditor: Differentiable Style Decomposition for Full 3D Scene Editing
Chunyi Sun, Yanbin Liu, **Junlin Han**, Stephen Gould
IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), 2024
11. Hyperbolic Audio-visual Zero-shot Learning
Jie Hong, Zeeshan Hayder, **Junlin Han**, Pengfei Fang, Mehrtash Harandi, Lars Petersson
International Conference on Computer Vision (ICCV), 2023
10. Curved Geometric Networks for Visual Anomaly Recognition
Jie Hong, Pengfei Fang, Weihao Li, **Junlin Han**, Lars Petersson, Mehrtash Harandi
IEEE Transactions on Neural Networks and Learning Systems (TNNLS), 2023
9. What Images are More Memorable to Machines?
Junlin Han, Huangying Zhan, Jie Hong, Pengfei Fang, Hongdong Li, Lars Petersson, Ian Reid
Preprint arXiv:2211.07625
8. GOSS: Towards Generalized Open-set Semantic Segmentation
Jie Hong, Weihao Li, **Junlin Han**, Jiyang Zheng, Pengfei Fang, Mehrtash Harandi, Lars Petersson
The Visual Computer, 2023
7. CropMix: Sampling a Rich Input Distribution via Multi-Scale Cropping
Junlin Han, Lars Petersson, Hongdong Li, Ian Reid
Preprint arXiv:2205.15955

6. You Only Cut Once: Boosting Data Augmentation with a Single Cut
Junlin Han, Pengfei Fang, Weihao Li, Jie Hong, Ali Armin, Ian Reid, Lars Petersson, Hongdong Li
International Conference on Machine Learning (ICML), 2022
5. Blind Image Decomposition
Junlin Han, Weihao Li, Pengfei Fang, Chunyi Sun, Jie Hong, Ali Armin, Lars Petersson, Hongdong Li
European Conference on Computer Vision (ECCV), 2022
4. Underwater Image Restoration via Contrastive Learning and a Real-world Dataset
Junlin Han, Mehrdad Shoeiby, Tim Malthus, Elizabeth Botha, Janet Anstee, Saeed Anwar, Ran Wei, Ali Armin, Hongdong Li, Lars Petersson
Remote Sensing, 2022
3. Single Underwater Image Restoration by Contrastive Learning
Junlin Han, Mehrdad Shoeiby, Tim Malthus, Elizabeth Botha, Janet Anstee, Saeed Anwar, Ran Wei, Lars Petersson, Ali Armin
IEEE International Geoscience and Remote Sensing Symposium (IGARSS, oral), 2021
2. Dual Contrastive Learning for Unsupervised Image-to-Image Translation
Junlin Han, Mehrdad Shoeiby, Lars Petersson, Ali Armin
New Trends in Image Restoration and Enhancement workshop (NTIRE), IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops (CVPRW, oral), 2021
1. SFD: Structure from Deformable Neural Point Field
Chunyi Sun, Huangying Zhan, **Junlin Han**, Stephen Gould
Under review