

# Junlin Han

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## EDUCATION

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### University of Oxford

PhD (Dphil) in Computer Vision

Supervised by [Prof. Philip Torr](#)

10.2023 – 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

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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

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### 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

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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

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**Conference review:** CVPR 2022 2023, 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

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**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

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

## FULL PUBLICATIONS

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12. 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*
11. CropMix: Sampling a Rich Input Distribution via Multi-Scale Cropping  
**Junlin Han**, Lars Petersson, Hongdong Li, Ian Reid  
*Preprint arXiv:2205.15955*
10. 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*
9. 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*
8. 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*
7. 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*
6. 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*

5. SFD: Structure from Deformable Neural Point Field  
Chunyi Sun, Huangying Zhan, **Junlin Han**, Stephen Gould  
*Under review*
4. 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*
3. NeRFEditor: Differentiable Style Decomposition for Full 3D Scene Editing  
Chunyi Sun, Yanbin Liu, **Junlin Han**, Stephen Gould  
*Preprint arXiv:2212.03848*
2. 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*
1. 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*