

Junlin Han

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EDUCATION

Australian National University

02.2019 – 06.2023

Bachelor of Information Technology (Honours)

Canberra, Australia

GPA: 3.95/4.00 (WES converted)

Expected to graduate with first-class honours

RESEARCH STATEMENT

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

- (1) **Generation** and **manipulation** of 2D, 3D, and 4D visual data,
- (2) Enhancement of knowledge sources through **data augmentation**,
- (3) Acquisition of a more profound **understanding of data's role** via cognitive perspectives.

EXPERIENCE

Visiting Research Intern

12.2021 – 05.2023

AIML, University of Adelaide

Adelaide, Australia

Advisor/Host: [Prof. Ian Reid](#)

Topics: data-centric AI, visual recognition, memorability

Research Student

08.2020 – 05.2023

Data61-CSIRO & Australian National University

Canberra, Australia

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

Topics: low-level vision, generative models, self-supervised learning

PUBLICATIONS

See my [webpage](#) for code, paper, dataset, project page, etc.

11. 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

10. CropMix: Sampling a Rich Input Distribution via Multi-Scale Cropping

Junlin Han, Lars Petersson, Hongdong Li, Ian Reid

Preprint arXiv:2205.15955

9. 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

8. 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

7. 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

6. 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

5. 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*

4. Hyperbolic Audio-visual Zero-shot Learning

Jie Hong, Zeeshan Hayder, **Junlin Han**, Pengfei Fang, Mehrtash Harandi, Lars Petersson

Under review

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

Preprint arXiv:2203.12116

1. Curved Geometric Networks for Visual Anomaly Recognition

Jie Hong, Pengfei Fang, Weihao Li, **Junlin Han**, Lars Petersson, Mehrtash Harandi

Preprint arXiv:2208.01188

SERVICES

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

Journal review: Transactions on Image Processing (TIP), 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 2022

NeurIPS (Conference on Neural Information Processing Systems)

Second Best Presentation Award 2021

AIM (Active Integrated Matter) Conference

Top-up Scholarship 2021

for research work at Data61-CSIRO

Undergraduate Vacation Scholarship 2020

for summer research at Data61-CSIRO

REFERENCES

Prof. Ian Reid

Professor, FAA FTSE

Email: ian.reid@adelaide.edu.au

University of Adelaide

Prof. Hongdong Li

Professor

Email: hongdong.li@anu.edu.au

Australian National University

Dr. Lars Petersson

Group Leader and Senior Principal Research Scientist

Email: lars.petersson@data61.csiro.au

Data61-CSIRO