

# JUNLIN HAN

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Last Updated: December 1, 2025

## EDUCATION

<b>University of Oxford</b> PhD (DPhil) in Computer Vision Supervised by <u>Prof. Philip Torr</u>	01.2024 – ongoing Oxford, UK
<b>Australian National University</b> Bachelor of Information Technology (Honours) GPA: 3.95/4.00	02.2019 – 07.2023 Canberra, Australia First-Class Honours

## EXPERIENCE

<b>Meta</b> <i>PhD Student Researcher</i>	10.2023 – ongoing <i>London, UK</i>
<ul style="list-style-type: none"><li>• <b>FAIR</b> (12.2025 – ongoing) <i>Host: Dr. Mike Lewis; Topics: MLLM pre-training</i></li><li>• <b>GenAI Llama Vision</b> (08.2024 – 12.2025) <i>Host: Dr. Filippos Kokkinos; Topics: MLLM post-training and pre-training</i></li><li>• <b>GenAI RepliGen</b> (10.2023 – 07.2024) <i>Host: Dr. Filippos Kokkinos; Topics: 3D Generation, video generation</i></li></ul>	
<b>Cybever</b> Lead Research Scientist Topic: Generative models for 3D world modeling	05.2023 – 09.2023 Remote
<b>AIML, University of Adelaide</b> Visiting Researcher Advisor: <u>Prof. Ian Reid</u> Topics: Data-centric AI, memorability	12.2021 – 05.2023 Adelaide, Australia
<b>Data61-CSIRO &amp; Australian National University</b> Research Student Advisors: <u>Dr. Lars Petersson</u> and <u>Prof. Hongdong Li</u> Topics: Generative models, self-supervised learning	08.2020 – 05.2023 Canberra, Australia

## SELECTED PUBLICATIONS

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

6. **Learning to See Before Seeing: Demystifying LLM Visual Priors from Language Pre-training**  
**Junlin Han**, Shengbang Tong, David Fan, Yufan Ren, Koustuv Sinha, Philip Torr, Filippos Kokkinos  
*Preprint*
5. **Flex3D: Feed-Forward 3D Generation with Flexible Reconstruction Model and Input View Curation**  
**Junlin Han**, Jianyuan Wang, Andrea Vedaldi, Philip Torr, Filippos Kokkinos  
*International Conference on Machine Learning (ICML)*, 2025
4. **VFusion3D: Learning Scalable 3D Generative Models from Video Diffusion Models**  
**Junlin Han\***, Filippos Kokkinos\*, Philip Torr  
*European Conference on Computer Vision (ECCV)*, 2024
3. **What Images are More Memorable to Machines?**  
**Junlin Han**, Huangying Zhan, Jie Hong, Pengfei Fang, Hongdong Li, Lars Petersson, Ian Reid  
*Preprint*
2. **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

## 1. 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

## CONTRIBUTED PROJECTS

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### • The Llama4 herd: The beginning of a new era of natively multimodal AI innovation

- Created a large-scale (over 100K) internal 3D multi-image understanding dataset covering multiple key 3D understanding abilities like depth estimation, correspondence matching, and multi-view reasoning.
- Designed a pipeline to label multiview raw data using 3D vision methods for precise annotation, which included an automated validation process.
- Integrated the dataset into Llama4 training workflows with rejection sampling, boosting multi-view understanding performance by over 30% on key benchmarks.

## ACADEMIC SERVICES

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- **Workshop Organization:** Foundation Models in the Wild (ICML 2024, ICLR 2025)
- **Conference Review:** CVPR (2022-2025), ICCV (2023, 2025), ECCV (2022, 2024), ICML (2022, 2024, 2025), NeurIPS (2022, 2023, 2025), ICLR (2023-2026), COLM (2025), SIGGRAPH Asia (2024, 2025), ACCV (2022), BMVC (2023), WACV (2024), AAAI (2023)
- **Journal Review:** TPAMI, IJCV, TIP

## AWARDS

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<b>Meta PhD Scholarship</b> <i>for PhD research at University of Oxford</i>	2023
<b>Chancellor's Letter of Commendation</b> <i>for best academic performance at Australian National University</i>	2022
<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 (\* DENOTES EQUAL CONTRIBUTION)

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27. **From Pixels to Feelings: Aligning MLLMs with Human Cognitive Perception of Images**  
Yiming Chen\*, **Junlin Han\***, Tianyi Bai, Shengbang Tong, Filippos Kokkinos, Philip Torr  
*Preprint*
26. **Scaling Sequence-to-Sequence Generative Neural Rendering**  
Shikun Liu, Kam Woh Ng, Wonbong Jang, Jiadong Guo, **Junlin Han**, Haozhe Liu, Yiannis Douratsos, Juan C Pérez, Zijian Zhou, Chi Phung, Tao Xiang, Juan-Manuel Pérez-Rúa  
*Preprint*
25. **Learning to See Before Seeing: Demystifying LLM Visual Priors from Language Pre-training**  
**Junlin Han**, Shengbang Tong, David Fan, Yufan Ren, Koustuv Sinha, Philip Torr, Filippos Kokkinos  
*Preprint*
24. **Unsupervised Decomposition of 3D Shapes into Expressive and Editable Extruded Profile Primitives**  
Chunyi Sun, **Junlin Han**, Runjia Li, Wejian Deng, Dylan Campbell, Stephen Gould  
*ACM SIGGRAPH*, 2025
23. **Flex3D: Feed-Forward 3D Generation With Flexible Reconstruction Model And Input View Curation**  
**Junlin Han**, Jianyuan Wang, Andrea Vedaldi, Philip Torr, Filippos Kokkinos  
*International Conference on Machine Learning (ICML)*, 2025

22. **Hallucination at a Glance: Controlled Visual Edits and Fine-Grained Multimodal Learning**  
 Tianyi Bai, Yuxuan Fan, Jiantao Qiu, Fupeng Sun, Jiayi Song, **Junlin Han**, Zichen Liu, Conghui He, Wentao Zhang, Binhang Yuan  
*NeurIPS*, 2025
21. **AuralSAM2: Enabling SAM2 Hear Through Pyramid Audio-Visual Feature Prompting**  
 Yuyuan Liu, Yuanhong Chen, Chong Wang, **Junlin Han**, Junde Wu, Can Peng, Jingkun Chen, Yu Tian, Gustavo Carneiro  
*Preprint*
20. **VGRP-Bench: Visual Grid Reasoning Puzzle Benchmark for Large Vision-Language Models**  
 Yufan Ren, Konstantinos Tertikas, Shalini Maiti, **Junlin Han**, Tong Zhang, Sabine Süsstrunk, Filippos Kokkinos  
*Preprint*
19. **Generalized Few-shot 3D Point Cloud Segmentation with Vision-Language Model**  
 Zhaochong An, Guolei Sun, Yun Liu, Runjia Li, **Junlin Han**, Ender Konukoglu, Serge Belongie  
*Conference on Computer Vision and Pattern Recognition (CVPR)*, 2025
18. **DreamBeast: Distilling 3D Fantastical Animals with Part-Aware Knowledge Transfer**  
 Runjia Li, **Junlin Han**, Luke Melas-Kyriazi, Chunyi Sun, Zhaochong An, Zhongrui Gui, Shuyang Sun, Philip Torr, Tomas Jakab  
*International Conference on 3D Vision (3DV)*, 2025
17. **3D-GPT: Procedural 3D Modeling with Large Language Models**  
 Chunyi Sun\*, **Junlin Han**\*, Weijian Deng, Xinlong Wang, Zishan Qin, Stephen Gould  
*International Conference on 3D Vision (3DV)*, 2025
16. **Semantic Score Distillation Sampling for Compositional Text-to-3D Generation**  
 Ling Yang, Zixiang Zhang, **Junlin Han**, Bohan Zeng, Runjia Li, Philip Torr, Wentao Zhang  
*Preprint*
15. **Learning-based Multi-View Stereo: A Survey**  
 Fangjinhua Wang, Qingtian Zhu, Di Chang, Quankai Gao, **Junlin Han**, Tong Zhang, Richard Hartley, Marc Pollefeys  
*Preprint*
14. **VFusion3D: Learning Scalable 3D Generative Models from Video Diffusion Models**  
**Junlin Han**\*, Filippos Kokkinos\*, Philip Torr  
*European Conference on Computer Vision (ECCV)*, 2024
13. **Strong and Controllable Blind Image Decomposition**  
 Zeyu Zhang\*, **Junlin Han**\*, Chenhui Gou\*, Hongdong Li, Liang Zheng  
*Preprint*
12. **How Many Unicorns Are in This Image? A Safety Evaluation Benchmark for Vision LLMs**  
 Haoqin Tu\*, Chenhang Cui\*, Zijun Wang\*, Yiyang Zhou, Bingchen Zhao, **Junlin Han**, Wangchunshu Zhou, Huaxiu Yao, Cihang Xie  
*European Conference on Computer Vision (ECCV)*, 2024
11. **NeRFEditor: Differentiable Style Decomposition for 3D Scene Editing**  
 Chunyi Sun, Yanbin Liu, **Junlin Han**, Stephen Gould  
*Winter Conference on Applications of Computer Vision (WACV)*, 2024
10. **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
9. **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
8. **What Images are More Memorable to Machines?**  
**Junlin Han**, Huangying Zhan, Jie Hong, Pengfei Fang, Hongdong Li, Lars Petersson, Ian Reid  
*Preprint*
7. **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

6. **CropMix: Sampling a Rich Input Distribution via Multi-Scale Cropping**  
**Junlin Han**, Lars Petersson, Hongdong Li, Ian Reid  
*Preprint*
5. **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
4. **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
3. **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 (Best paper award)*, 2022
2. **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 (oral)*, 2021
1. **Dual Contrastive Learning for Unsupervised Image-to-Image Translation**  
**Junlin Han**, Mehrdad Shoeiby, Lars Petersson, Ali Armin  
*CVPR NTIRE Workshops (oral)*, 2021