

## 1 Education

- Ph.D.**, Australian National University, Australia **2024.01 - 2027.12**
- Research Interests: Geometric Deep Learning, Computer Graphics, Machine Learning and Human Motion Generation.
  - Supervisor: Prof.Hongdong Li.
- Master of Machine Learning and Computer Vision**, Australian National University, Australia **2021.08 - 2023.07**
- Thesis topic: Generative Model Approaches for 3D Full-Body Human Pose Reconstruction from Sparse Joint Observations.
- Bachelor of Electrical Engineering (Honor)**, University of Sydney, Australia **2018.08 - 2020.06**
- Bachelor of Electrical Engineering**, Harbin Institute of Technology (HIT), China **2016.08 - 2018.06**

## 2 Research Publication

- Zhenyu Li, **Xuyang Wang**, Junjun Jiang, Xianming Liu, "**BinsFormer: Revisiting Adaptive Bins for Monocular Depth Estimation**". Arxiv. (Submitted to IEEE TIP). [[pdf](#)]
- Tackling the Monocular Depth Estimation task with the first DERT-like decoder structure to perform coarse-to-fine depth maps estimation, on KITTI, NYU, and SUN RGBD datasets.
  - Ranked 1st on KITTI depth estimation benchmark (Feb, 2022).

## 3 Internship Experience

- Research Intern** **Tencent XR Lab, Canberra, Australia** **2022.08 - 2023.05**
- Project: *3D Human Pose Estimation and Reconstruction from the VR equipment*, supervised by **Prof. Hongdong Li**.
  - The work reconstructs the full body SMPL model from VR headset and controllers' signals with Transformer, VAE, CVAE and diffusion model.
- Software Engineer Intern** **Baidu Inc., Shanghai, China** **2021.11 - 2022.01**
- Project: *3D Points Clouds Tracking for Vehicles*, supervised by the Baidu's Automatic Driving Engineering Group.
  - Developed a 3D points cloud tracking software for NuScenes and Baidu's datasets. The software comprises a point cloud visualization tool, a data preprocessing module, and a neural tracking module with CenterPoints algorithm.
- Software Engineer Intern** **Pushi AI, Haikou, China** **2021.05 - 2021.07**
- Project: *Data Analysis for Cross-Broader E-Commerce*, supervised by the Knowledge Graphs Algorithm Group.
  - Developed a data crawling and analysis software for the project independently.
- Research Intern** **Corerain Technologies, Shenzhen, China** **2019.12 - 2020.02**
- Project: *Deep Learning Acceleration on Hardware*, supervised by Dr. Kuen Hung Tsoi, Dr. Zhiqiang Que.
  - Researched on the topic "Acceleration Potentials for NLP's Algorithms on Hardware Implementation". Specifically, we investigated the parallelism capabilities of arithmetic logic units in RNN, GRU, LSTM and Attention mechanism.

## 4 Academic Services

- Academic Tutor** **Australian National University** **2022 - 2024**
- *COMP8610 Computer Graphics*, Semester 1 2024, supervised by Prof. Hongdong Li.
  - *COMP8536 Advanced topics of Deep Learning in Computer Vision*, Semester 2 2022, supervised by Prof. Nick Barnes.
- Conference Reviewer:** ECCV 2024, ECCVW 2024, NIPS 2024

## 5 Project Experience

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### Portrait Background Replacement with Image Matting and Relighting, Australia

2022.08 - 2022.11

- Course project for COMP6528 Computer Vision. The work designed a novel algorithm for high-fidelity background replacement, composed by human detection, background matting and the portrait relighting modules. A large scale simulation dataset was proposed as well.

### Personality Prediction From What They Say: Semantic Analysis of MBTI, Australia

2022.03 - 2022.05

- Course project for ENGN8535-Engineering Data Analysis. The work implemented word vectorization and machine learning techniques to inference users' MBTI personalities from their language.

### Pedestrian Tracking for Crowded Scenes with YOLOX, Australia

2021.09 - 2021.11

- Course project for COMP8536 Deep Learning for Computer Vision. We developed a pedestrian tracking algorithm for crowded scenes with DeepSORT and YOLOx.

### Wireless Signal Modulation Classification with on PCA and UMAP, Australia

2019.07 - 2020.06

- Bachelor Honor thesis supervised by Prof. Philip Leong. Developed a learning based modulation classifier for GNU radio signals under different noise conditions.

### NASA International Space App Challenge, Australia

2019.10

- 2019 NASA Space App challenge. Developed an educational app utilising NASA's satellite database. 1st runner up, awarded with the "Local People Choice Winner". [Demo](#)

## 6 Scholarships

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### University Research Scholarship

2024.01 - 2028.01

- Issued by the Australian National University (College of Computer Science, Engineering and Cybernetics) for International Research Candidates.
- Associated with ANU HDR Fee Merit Scholarship, covering all tuition fees for Ph.D degree.

### Hex Singapore Program Scholarship

2023.06 - 2023.07

- Issued by the Australian National University (College of Computer Science, Engineering and Cybernetics), funding for the HEX Singapore program, return airfares, accommodation and A\$200 food allowance.

### Faculty of Engineering and Information Technologies Credit Agreement Scholarship

2018.08 - 2020.06

- Issued by the University of Sydney.

### Vice Chancellor's Global Mobility Scholarship

2019.07 - 2019.08

- Summer school program "Global Cities as Center of Knowledge Production" at Humboldt University of Berlin.
- Issued by the University of Sydney.

## 7 Miscellaneous

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### Pitch Winner, Hex Singapore

2023.06 - 2023.07

- Winner Pitch at HEX Singapore, with entrepreneurs and industry stakeholders in Singapore.

### Gear Officer, Bush Walk Society of University of Sydney (SUBW)

2019.03 - 2020.03

- Member in SUBW Committee. Responsible for the hiking equipment management and trip organisation for Kiama Coast and the annual Christmas Walk.

### Museum Guide, HIT Museum, Harbin, China

2017.10 - 2018.06

- English guiding assistant for Harbin Institute of Technology History Museum.
- Awarded as the "Best Narrators of 2017" of HIT museum.