

## 1 Education

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**Master of Machine Learning and Computer Vision**, Australian National University, Australia **2021.08 - 2023.07**

- GPA: 6.289/7.0

- Thesis topic: Generative Model Approaches for 3D Full-Body Human Pose Reconstruction from Sparse Joint Observations.

**Bachelor of Engineering (Honor)**, University of Sydney, Australia **2018.08 - 2020.06**

- Major in Telecommunication Engineering.

**Bachelor of Engineering**, Harbin Institute of Technology (HIT), China **2016.08 - 2020.06**

- Major in Electrical Engineering and Automation.

- 2+2 Program with University of Sydney

## 2 Research Publication

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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

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**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 Teaching Experience

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**Academic Tutor** **Australian National University** **2022.08 - 2022.12**

- Tutored *COMP8536 Advanced topics of Deep Learning in Computer Vision* in Semester 2 2022, supervised by Prof. Nick Barnes.

## 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

- 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

- 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.

## 8 Skills

- **Programming:** Python, Java, C, MATLAB
- **Deep Learning Framework:** Pytorch
- **Research Interest:** Generative Models, 3D Human Pose Estimation and Motion Generation, Low Level Computer Vision, Tracking.
- **Other skills:** Teamwork, Communication, Social Engagement, Business Analysis; Proficient with Management and Presenting Software (Canva, Microsoft Powerpoint, Flowchart etc.)