Yingxuan You

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Education

Peking University (PKU) *Beijing, China*
Third-Year Master Student in Computer Science. Advisor: Prof. **Hong Liu**. 2021.09 – 2024.07
Research Topics: 3D Human Pose and Shape Estimation. **GPA: 3.91 / 4.0**

Beihang University (BUAA) *Beijing, China*
Bachelor of Automation Science. 2017.09 – 2021.06
Bachelor Thesis: Multimodal Semantic SLAM for Dynamic Environments. **GPA: 3.84 / 4.0**

Publications

- **Co-Evolution of Pose and Mesh for 3D Human Body Estimation from Video**
  Yingxuan You, Hong Liu, Ti Wang, Wenhao Li, Runwei Ding, Xia Li.
  *IEEE International Conference on Computer Vision (**ICCV**)*, 2023. **Project Page**
- **GATOR: Graph-Aware Transformer with Motion-Disentangled Regression for Human Mesh Recovery from a 2D Pose**
  Yingxuan You, Hong Liu, Xia Li, Wenhao Li, Ti Wang, Runwei Ding.
  *IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP**)*, 2023.
- **MISD-SLAM: Multimodal Semantic SLAM for Dynamic Environments**
  Yingxuan You, Peng Wei, Jialun Cai, Weibo Huang, Risheng Kang, Hong Liu.
  Wireless Communications and Mobile Computing, 2022.
- **An Efficient Graph Transformer Network for Video-Based Human Mesh Reconstruction**
  Tao Tang, **Yingxuan You**, Ti Wang, Hong Liu.
  *CAAI International Conference on Artificial Intelligence (**CICAI**)*, 2023.
- **SPSD: Semantics and Deep Reinforcement Learning Based Motion Planning for Supermarket Robot**
  Jialun Cai, Weibo Huang, **Yingxuan You**, Zhan Chen, Bin Ren, Hong Liu.
  IEICE TRANSACTIONS on Information and Systems, 2023.
- **Interweaved Graph and Attention Network for 3D Human Pose Estimation**
  Ti Wang, Hong Liu, Runwei Ding, Wenhao Li, **Yingxuan You**, Xia Li.
  *IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP**)*, 2023.

Submitted Papers

- **LINK: A Lightweight Inverse Kinematics Network for 3D Human Mesh Reconstruction from Videos**
  Yingxuan You, Hong Liu, Mengyuan Liu, et al. (**Submitted to TMM**).

Work Experience

Alibaba, *Hangzhou, China* 2023.07 – 2023.12
Research Intern in Digital Human Team. Topic: 3D Face Reconstruction & Texture Generation.

- Explore effective constraints on face texture generation to fine-tune diffusion model w/o 3D scanned data.
- Propose DiffFace and self-supervised constraints to learn high-quality and renderable texture from image.
- Design a side branch with a condition input to beautify the original texture and maintain personal identity.

EasyHome, *Beijing, China* 2021.03 – 2021.08

Research Intern in SLAM Team. Topic: SLAM & 3D Scene Reconstruction.

- Study semantic SLAM for indoor scenes that combines the visual SLAM with the segmentation network.
- Alleviate the impact of dynamic pixels using semantic information and multi-view geometric constraints.
- Scan and build a housing dataset. Test algorithm effectiveness on IOS & Android in real-world practices.

Projects Experience

Intelligent Supermarket Robot, Perception Team Leader 2022.07 – Present

- Goal: To enable the robot to perceive the environment and provide customer service.
- Main work: 1) 3D Scene Reconstruction: Combine a RGB-D camera and SLAM system to reconstruct the dense RGB point cloud map of the supermarket. 2) Human Body Tracking: Estimate 3D human pose from images to control the robot's speed and direction, achieving accurate and real-time human body tracking.

Invention Patent

- **A 3D Human Mesh Reconstruction Method Based on Graph Skeleton Attention.**
  Hong Liu, **Yingxuan You**, Yang Chen, Wenhao Li.
  Invention patent, Published Application Number: CN115294265A, 2022.
- **A 3D Human Pose Estimation Method Based on Interweaved Graph and Attention Network.**
  Hong Liu, Ti Wang, Wenhao Li, **Yingxuan You**, Runwei Ding.
  Invention patent, Published Application Number: CN116129051A, 2023.

Competition

- **Honorable Mention** of China Undergraduate Physical Experiment Competition. 2020
- **Honorable Mention** of Mathematical Contest in Modeling. 2020
- **First Prize** of Beijing Undergraduate Physical Experiment Competition. 2019
- **First Prize** of Beijing Undergraduate Mathematical Contest in Modeling. 2019
- **First Prize** of China Undergraduate Mathematical Contest in Modeling. 2018
- **Second Prize** of Beijing Mathematics Competition. 2018

Awards and Honors

- Outstanding Graduate Award, *Peking University* (**Top 5%**) 2024
- Merit Student Scholarship, *Peking University* (**Top 5%**) 2022, 2023
- Outstanding Graduate Award, *Beihang University* (**Top 5%**) 2021
- First Prize of Segway-Ninebot Scholarship, *Beihang University* (**Top 1%**) 2021
- First Prize of Competition Scholarship, *Beihang University* (**Top 2%**) 2019, 2020
- Excellent Student Cadres Award, *Beihang University* (**Top 1%**) 2019, 2020
- Innovation Student Award, *Beihang University* (**Top 0.2%**) 2018

Skills

- **Programming**: Python, Pytorch, C/C++, MATLAB, LaTeX.
- **Language**: Mandarin (Native), English (Fluent, IELTS: 7.0).

Open Source

Codes for my published papers are available on my GitHub:

- (ICCV 2023) PMCE: https://github.com/kasvii/PMCE
- (ICASSP 2023) GATOR: https://github.com/kasvii/GATOR