Jyun-Ting Song

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Research Interests

Fields: Computer Vision, Robotics, Machine Learning
Topics: Human Pose Estimation, Human Mesh Recovery, Physics-Based Humanoid Control

Education

Carnegie Mellon University — *Advisor: Prof. **Kris Kitani***
Ph.D. in Robotics — *Sept 2026 – Sept 2029 (expected)*

Carnegie Mellon University — *Advisor: Prof. **Kris Kitani***
M.S. in Robotics, Cumulative GPA: 3.8/4.0 — *Sept 2023 – Dec 2025*

National Taiwan Normal University — *Advisor: Prof. **Jacky Baltes***
M.S. in Electrical Engineering, GPA: 4.21/4.3 — *Sept 2021 – Jan 2023*

National Taiwan Normal University — *Advisor: Prof. **Jacky Baltes***
B.S. in Electrical Engineering, GPA: 3.8/4.3 — *Sept 2017 – May 2021*

Research Experience

Unified Multi-View Capture System for In-the-Wild Human Reconstruction — *Sept 2025 - present*
- Automating multi-view processing with sub-frame temporal alignment for human reconstruction

Promptable 3D Human Mesh Recovery — *June 2025 - Sept 2025*
- Contributed to model development and training for a promptable 3D human recovery model

Hand Pose Reconstruction and Finger Contact for Dexterous Manipulation — *Aug 2024 - May 2025*
- Constructed a large-scale 3D human dataset for dexterous operations with finger contact
- Developed a multi-view processing pipeline for precise hand pose reconstruction

Close Human 3D Reconstruction from In-the-Wild Videos — *Oct 2023 - Jun 2024*
- Constructed a large-scale 3D human dataset for close human interaction
- Developed a multi-view processing pipeline for severely occluded human under close interaction

Balancing Control for a Humanoid Agent in a Dynamic Environment — *Jan 2022 - Jan 2023*
- Designed a RL framework to train a humanoid agent to play a balance board in simulation

An Olympics Sports Humanoid Robot — *Sept 2019 - July 2021*
- Developed versatile humanoid robot that could perform skills of Olympic sports events such as archery, basketball, weightlifting, sprint and marathon

Publications

* indicates equal contribution

[1] **Contact4D: A Video Dataset for Whole-Body Motion and Finger Contact in Dexterous Operations**
Jyun-Ting Song, Jungeun Kim, Jinkun Cao, Yu Lei, Takuma Yagi, Kris Kitani
Proceedings of the 2026 International Conference on 3D Vision (3DV), 2026.

[2] **BodyContact4D: A Video Dataset for Understanding Human and Environment Interactions**
Soyong Shin, Chaeeun Lee, Holly Chen, **Jyun-Ting Song**, Eni Halilaj, Kris Kitani
Proceedings of the 2026 International Conference on 3D Vision (3DV), 2026.

[3] **SAM 3D Body: Robust Full-Body Human Mesh Recovery**
Sam3D Body Team at Meta
Technical Report, 2025.

[4] **Harmony4D: A Video Dataset for In-the-Wild Close Human Interactions**
Rawal Khirodkar*, **Jyun-Ting Song***, Jinkun Cao, Zhengyi Luo, Kris Kitani
Advances in Neural Information Processing Systems (NeurIPS), 2024.

[5] **Reinforcement Learning and Action Space Shaping for Humanoids in Highly Dynamic Environment**
Jyun-Ting Song, Guilherme Christmann, Jaesik Jeong, Jacky Baltes
Springer's Studies in Computational Intelligence (SCI), 2023

[6] **The Corsmal Benchmark for the Prediction of the Properties of Containers**
Alessio Xompero, et al.
IEEE Access, 2022.

Work Experience

Graduate Research Assistant — *Pittsburgh, USA*
Carnegie Mellon University — *Sep 2025 – May 2026*

Research Scientist Intern — *California, USA*
Meta Platform Inc. — *June 2025 – Sep 2025*

Graduate Research Assistant — *Pittsburgh, USA*
Carnegie Mellon University — *Jan 2024 – May 2025*

Research Assistant — *Taipei, Taiwan*
National Taiwan Normal University — *Sep 2021 – Jan 2023*

Competitions & Awards

1st Place, All-Round, HuroCUP, FIRA RoboWorld Cup 2022 — *July 2022*
- **1st Place** in Basketball and Weightlifting, **2nd Place** in Sprint and Archery [link]

1st Place, IJCAI 2021 - Robot Magic and Music Competition — *Aug 2021*
- Developed a humanoid robot that could perform interactive card magic [link]

2nd Place, Basketball, FIRA SimulCup 2021 — *July 2021*
- Developed a humanoid that could grab and dunk a ball with 98% accuracy [link]

2nd Place, ICPR 2020 - CORSMAL Challenge — *Sept 2020*
- Estimated container attributes using a multimodal dataset [link]

1st Place, Archery, Taiwan Humanoid 2020 — *July 2020*
- Developed a humanoid robot that autonomously shoots an arrow at a moving target [link]

Skills & Interests

Languages: Mandarin Chinese (native), English (fluent)
Programming: Python, C++, C, HTML, LaTeX
Platforms & Tools: PyTorch, PyTorch3D, Scikit-learn, NumPy, Matplotlib, ROS, Isaac Lab
Interests: Basketball, Guitar, GO