

Yung Jhang (Jarvis) Hou

fubon920831@gmail.com | (886) 909-750-831 | Github/Jar-17 | LinkedIn/Jar-17

EDUCATION

Technical University of Munich (TUM)

Munich, Germany

Exchange Program in Informatics

Sep 2025

- Awarded Transcolarship, a merit-based scholarship for outstanding exchange students

National Cheng Kung University (NCKU)

Tainan, Taiwan

B.S. in Computer Science and Information Engineering | GPA: 3.9/4.0

Jun 2025

- Received Dean's Award, Fall 2021 & Spring 2022

PROFESSIONAL EXPERIENCE

Research Assistant

Remote

Collaborate with TUM PhD student Weihang Li [🔗](#)

Present

- exploring CAD models and feature matching for improved pose estimation, aiming to publish on CVPR 2026

Research Assistant

Tainan, Taiwan

Multimedia and Computer Vision Laboratory, NCKU [🔗](#)

Oct 2024 - Mar 2025

- Contributed to the publication "Vision-Based 3D Baseball Swing Trajectory Reconstruction and Swing Performance Analysis. MMM2026. MOMST: Special Session on Multi Object Multi Sensor Tracking"
- Improved bat motion 3D reconstruction accuracy by 2.8 cm MPJPE (Mean Per Joint Position Error) and 2.1 cm PMPJPE (Procrustes Aligned MPJPE) with YOLOv8-Pose fine-tuning and swing trajectory curve fitting
- Reduced 90% hardware cost by replacing Vicon system (industry-standard motion capture system, 39 markers and 8 sensors) with two Sony AX700 cameras, and Optimized system runtime (including setup, calibration, reconstruction) by 95.5% with an automated recalibration pipeline using ArUco markers (for camera pose estimation) and multiprocessing

Research Intern

Tainan, Taiwan

KeepTossingLab (KTL) [🔗](#)

Oct 2024 - Mar 2025

- Enhanced ball detection accuracy by 50% in low-light, noisy conditions by improving YOLOv7 fine-tuning performance through depth-based detection and filtering algorithms
- Solved high-speed baseballs (approximately 70 mph) tracking in occluded scenes by developing a linked-list-based algorithm incorporating speed vector analysis for trajectory prediction

Research Team Leader

Tainan, Taiwan

Robotics Laboratory, NCKU

Aug 2023 - Jun 2024

- Developed an automated pitching replay system using MediaPipe for joint-angle extraction, designed a pitching-phase identification method, and built a complete pipeline that provides swing metrics (e.g., trigger-to-impact time, swing angle), bat-path visualization via YOLOv7, and a swing-analysis algorithm.
- Led a 4-person multidisciplinary team to achieve 3,600+ viewers on YouTube streaming and coordinated the development of a real-time game analysis system with live streaming capabilities

EXTRACURRICULAR EXPERIENCE

Reception Team Leader of the University of Melbourne Customized Chinese Program

Jun 2024 - Jul 2024

- Coordinated welcome and farewell events for 20+ international students and managed a 10-member reception team

Intercultural Student Volunteer (ISV)

Mar 2023 - Mar 2025

- Cooperated with colleagues for multimedia content showcasing Taiwanese culture for 3000+ visiting students

NCKU Baseball Team

Jul 2022 - Jun 2025

- Arranged infielder training sessions for 6 infielders and facilitated communication with 4 coaching team members
- Contributed to the team's 5th place finish in the University Baseball League (2024, 2025)

SKILLS

Programming Languages: Python, C, C++

Frameworks: PyTorch, CUDA, OpenCV, ROS, YOLOv7, MediaPipe, Git, Linux