

Boxuan Ye

ORCID: 0009-0004-3104-2788 | Tel: +44 07422720280 | Email: yeboxuan@gmail.com

EDUCATION BACKGROUND

Imperial College London

Master of Design Engineering (MEng)

Grade: First Class (Expected)

London, UK

June 2023- June 2027

PUBLICATION

- Hou, P., Zhang, Y., Zhou, W., Ye, B., & Wu, Y. (2025). A lightweight network for category-level open-vocabulary object pose estimation with enhanced cross implicit space transformation. *Engineering Applications of Artificial Intelligence*, Volume 155, 110890, ISSN 0952-1976

WORK EXPERIENCE

Central Research Centre, Media Group

Foshan, China

Humanoid Robot Internship

July 2025 – October 2025

- Assisted in developing a Vision Pro-based humanoid teleoperation system, enabling real-time remote manipulation through mixed-reality interface.
- Designed and implemented an open-vocabulary 6D pose estimation pipeline, integrating GroundingDINO, SAM-HQ, DINOv3 and FoundationPose to generalize between CAD-based and non-CAD objects.
- Built dataset generation pipeline via **Blender synthetic rendering** for 6D pose training and evaluation.
- Implemented the Pi0.5 Vision-Language-Action (VLA) algorithm on a self-developed Apple Vision Pro teleoperation system, enabling the humanoid robot to perform tasks such as pouring water and picking up fruit.

Laboratory of High-end Heavy-load Robots, KUKA Robotics

Shanghai, China

Embodies Intelligence Technology Internship

July 2024 - September 2024

- Implemented oven door opening/closing and screw-tightening tasks with a household robot, utilizing a stereo camera to compute disparity, enabling the adaptation of low-precision cameras and robotic arms for high-precision tasks
- Utilized RoboCasa, Isaac Gym, and MuJoCo, and integrated self-developed robot into reinforcement learning training on industrial-level tasks, including screw-tightening tasks, and assembly tasks
- Developed comprehensive ROS status monitoring and facial expression display to improve system observability and human-robot interaction with human, reduced sense of separation between people and robots.
- Co-authored a 6D pose estimation paper, recently submitted to the journal *Engineering Applications of Artificial Intelligence (EAAI)*; contributed to algorithm design, experiments, and manuscript writing.

ACEDAMIC EXPERIENCE

Vision-Guided Robotics Arm Grasping

Shanghai, China

Independent Research

July 2024 - September 2024

- Achieved target-object grasping with a 6DoF robotic arm by using Python-UART control, leveraging YOLOv8 and RealSense RGB-D data for object localization, and completing hand-eye calibration with IKPy-based inverse kinematics for precise motion execution.

Statistical Machine Learning Methods for Successfulness Predictions

London, UK

Data Science Research Project

April 2024 – June 2024

- Developed an 81.7%-accuracy GDP classification model using Random Forest and XGBoost, optimized via GridSearchCV and RFE, balanced performance and computation with a custom Performance Index, and applied UMAP visualization to assess data separability and guide further cleaning.

EXTRA-CURRICULUM

DesSoc , Imperial College London

London, UK

Workshop Manager

September 2024 – September 2025

- Organizing a Swift Programming Workshop in November to teach students Apple development, focusing on Swift fundamentals, iOS app creation, and hands-on experience with Xcode.

Robotics Society , Imperial College London

London, UK

Member

September 2024 - Present

- Utilized the society's fabrication facilities for 3D printing, laser cutting, and circuit soldering to prototype robotic components, while collaborated with peers to test and assemble mechanical for student robotics projects.

Motorsports Society , Imperial College London

London, UK

Race Manager

September 2023 – September 2024

- Organized Imperial College's team for the BUKC 2024 24-hour endurance race, serving as Race Manager responsible for pit-stop scheduling, BOP ballast adjustments, driver rotations, lap-time tracking, and real-time strategy optimization.

Melon Band , Imperial College London

London, UK

Bassist

September 2024 – Present

- Rehearse weekly and perform each term as the band's bassist, including exhibition shows, and developed an internal scheduling algorithm to optimize rehearsal availability across members.

SKILLS

Robotics | Computer Vision | ROS | Python | C++ | JavaScript | MATLAB | Fusion 360 | Arduino IDE | Photoshop | Video Editing | Markdown | LaTeX | Zotero | English (fluent; TOEFL:112) | Mandarin Chinese(native)