

## Education

Carnegie Mellon University, Robotics Institute	09/2024 – 05/2026
Master in Robotic Systems Development	Pittsburgh
University of Paris Saclay, School of Computer Science	09/2021 – 09/2023
Master in Big Data Management and Analytics (Graduating with Honors, Average Grades: A+)	Paris
Tsinghua University	09/2011 – 07/2016
Bachelor in Information Management and Information Systems, Second Bachelor in Interactive Media Design	Beijing

## Programming Skills

- Fine-tuning Large Language Models (LLMs), Vision Language Models (VLMs), Stable Diffusion XL (SDXL). AI Agent Development. Pytorch. TensorRT.
- Robotics: Reinforcement Learning (RL), Omniverse Isaac Sim simulator, ROS2, CAD, PCB.
- Databases: SQL, Neo4j, MongoDB, Spark, HDFS, MapReduce, etc.

## Publications

Physics Representation Learning for Dexterous Manipulation Planning, **Best Student Paper**, IEEE RO-MAN 2024

- (First Author) Developed physics-based semantic representations for dexterous manipulation actions, validated in four scenarios—hammering, sweeping, pinching, and screwing—using A2C algorithm in Omniverse Isaac Sim. [Link](#)

Accessibility-Aware Reinforcement Learning for Inclusive Robotic Navigation, IEEE RO-MAN 2024

- Extracted accessibility features for the disabled and incorporated into navigation RL policy for robotic assistance.

## Work Experience

(Full-time, left for Master's) **Senior Machine Learning Engineer, Embodied AI, Cylingo Group** 07/2024 – 08/2024

- Systematically designed algorithms for a mobile household companion robot prototype.
  - Integrated VLMs with ROS2 navigation: Implemented ASR for speech-to-text, VLMs for visual planning and object grounding, and utilized a depth camera to project 2D object pixels to SLAM maps.
  - CV Algorithms: Enhanced human-following integrating clothing-changing Person Re-Identification (CC-ReID) algorithms with face recognition. Quantized YOLOv8 and DeepSORT on Jetson Orin using TensorRT for a 3x speed-up.

(Intern) **Multimodal Machine Learning Engineer, Frontis Company** 04/2024 – 06/2024

- Enhanced Semantic Alignment for SDXL with LLM: Fine-tuned adapters only to improve SDXL's understanding of complex text prompts for controllable advertisement image generation (media exposure [Link](#)).
- Initiated a data flywheel project and curated 50k high-quality marketing QA data pairs from marketing media articles.

(Intern) **AI Agent Developer, Center for Collaborative & Conversational Intelligence, Tsinghua** 11/2023 – 03/2024

- Partnered with China National Protein Center to create an AI Agent framework for proteomics hypothesis discovery.
  - Migrated Bio-info packages from R to Python as agent tools, embedded 10k+ research papers as RAG.
  - Designed a chain of thought for bioinformatics tool invocation and improved accuracy with prompt engineering.

Visiting Student Researcher, **Social AI & Robotics Lab, King's College London** 03/2023 – 08/2023

- Created a physical Human-Robot Interaction (pHRI) Reinforcement Learning benchmark for the Toyota Human Support Robot (HSR) in Omniverse Isaac Sim, employing PPO and TD3 as baselines. [Link](#)
- In the simulation, integrated inverse kinematics Python API from Blender to create arbitrary animations for human bones, and enabled collision detection between human meshes and robots for realistic physical interactions.
- Explored digital twin. For real2sim, 3D scene & human pose reconstruction via InstantNerf and HybriK; for sim2real, vision-based training on photorealistic synthetic scenes, translated to physical robot camera seamlessly.

(Full-time) **Technology Investment Manager, Node Venture Capital** 2018.04 – 2019.08

- Led due diligence for investments (Fractal, Bitcent, Bitforest, Matrix, etc) from Angel to Series B rounds in AI, Blockchain, and New Consumptions. Networked with US tech venture funds. Facilitated academic incubations.

**(Full-time) Business Analyst, Global Fund Department, JD Private Equity**

2016.04 – 2017.12

- Fundraising for Funds: Collaborated on drafting USD FUND III Private Placement Memorandum and PitchBook with King & Wood Mallesons HK office. Engaged in communications with potential LP investors.