



Yangtao Fang

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Paris, France

EDUCATION

Institut Polytechnique de Paris

Palaiseau, France

M.S. in Computer Science | *Data and Artificial Intelligence track*

Sep 2024 - Expected Aug 2026

Coursework: NLP · Reinforcement Learning · Computer Vision · SLAM · Database · Graph Learning · Data Visualization

Yanshan University

Qinhuangdao, China

B.Eng. in Robot Engineering

Sep 2020 - Jun 2024

Teaching: Teaching assistant of Robot Perception (TrioBASIC language, Motion Control)

Thesis: Design of a Biomimetic Micro Robot for Intestinal Diagnosis and Treatment [Demo] [Docs]

Honors: 6 Scholarships for academic excellence (top 30%), Excellent Thesis Award, 2020 Merit Student of School (top 5%)

EXPERIENCE

Interdisciplinary Institute of Innovation i3 CNRS, Télécom Paris [Docs] [Slide]

Palaiseau, France

AI Research Intern | Fullstack · MLOps · Prompt Engineering · OCI Compute · User Research

Jun 2025 - Aug 2025

- Developed a collaborative AI image generator with React-Flask architecture on Oracle Cloud, integrating prompt fusion, intelligent creative guidance, project management, and team data visualization, boosting high-quality image generation success rate by 50%
- Utilized Python multiprocessing to create isolated Gradio instances and integrated FRP to generate persistent URLs for each instance, enabling automatic workspace state recovery after server restarts, resolving Gradio's concurrency performance issues
- Led usability testing and user research; achieved an SUS score of 85.5 (Excellent), significantly above industry benchmarks

U2IS Laboratory, ENSTA [Poster] [Code] [Docs]

Palaiseau, France

Research Assistant | Computer Vision · Pose Estimation · Multimodal Learning · PyTorch

Jan 2025 - Apr 2025

- Built a dataset of 3,000 images with precise annotations of long jump athletes' foot-ground contact states and 2D skeletons
- Designed a ViT-LSTM architecture leveraging an attention fusion mechanism to combine ankle image features with normalized pose data for fine-grained five-stage foot-ground contact states, improving action evaluation efficiency; Presented oral talk at GAS'25
- Achieved 91.87% accuracy (+9% over baseline) with 8.18 ms/frame real-time inference under low-resource, low-frame-rate settings

Shandong Lingong Construction Machinery Co., Ltd. (Volvo Group) [Demo]

Linyi, China

Summer Intern | PLC · Mechanical Design · Logistics Efficiency Optimization

2023 Summer

- Collaborated with an 8-member team to design a Siemens S7-1200 PLC-based automated logistics system for material flow
- Saved 0.3 FTE through logistics efficiency improvements, secured First Prize in the Intern Automation Competition

Department of Vehicle Engineering, Yanshan University [Paper]

Qinhuangdao, China

Research Assistant | Parallel Robot Design · CAD Modeling

May 2022 - Jun 2023

- Designed 3 active seating adjustment suspensions using SolidWorks to enhance the mobility workspace of wheelchair users
- Built a 4-DoF 4-UPU parallel manipulator prototype, conducted static load testing for safety, secured a full research grant (1,200€)

PROJECTS

Parameter-efficient Fine-tuning of Small Language Models for Accurate Text Summarization [Code] [Docs] Feb 2025 - Mar 2025

- Distilled knowledge from LLM (Qwen2.5-14B) to fine-tune SLM (Qwen2.5-0.5B), improving ROUGE score by 80% over baseline
- Adopted LoRA and 4-bit quantization, reducing computational resource consumption during training by 75%

Deep Learning-Based Automated Traffic Monitoring and Planning System [Code] [Demo] [Slide]

Oct 2024 - Dec 2024

- YOLOv5-based vehicle detection (mAP@0.5 = 0.98), ResNet50-based weather detection, Target tracking with Kalman filter

4-DOF Robotic Sorting System Using Vision Camera and TRIO Motion Controller [Code] [Demo] [Slide]

Nov 2023 - Jan 2024

- Built the sensing and control system, programmed TRIO controller via Motion Perfect, achieved closed-loop control of the system
- Led robotic sorting system integration for a dark factory, reaching 99.3% sorting accuracy for parts of varying shapes

Autonomous Obstacle-Avoidance and Line-Following Mobile Robot [Code] [Demo]

Jun 2023

- Developed C-based control programs for STM32, Infrared+grayscale sensors detection, BLE4.0 communication, motor control

Eye Tracking using Deep Learning [Docs] | Salaries Visualization [Code] | ABB Robot Simulation [Code] | Object Tracking [Code]

SKILLS & ACTIVITIES

Code: Python, C, JavaScript, SQL, HTML, CSS

Deep Learning: PyTorch, Scikit-Learn, OpenCV, NumPy, Pandas

Full Stack: React, Flask, Oracle Cloud

Motion Control: MATLAB, Keil, Motion Perfect, ABB RobotStudio, STEP7

Mechanical Design: SolidWorks, CAD, Simulink

IT Tools: Linux, Git, Bash, phpMyAdmin, WordPress, LaTeX, SSH

Languages: Mandarin (native), English (fluent)

Interests: Blogger (2K+ followers), Chinese Calligraphy [Works], Photography [Works], Table Tennis, Harmonica, Cooking, Hi-Fi

Leadership: 19th World Walking Assembly Volunteer: Guided 10,000 participants on a 5-km hike

YSU Tech Association Secretary: Organized online machine design competition during COVID-19, attracting 100+ students