

Heyuan LIU

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M2 student in Artificial Intelligence and Advanced Visual Computing at École Polytechnique

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Looking for an internship from April to October 2025 and PhD positions in 2025

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EDUCATION

École Polytechnique <i>Master of Science and Technology Artificial Intelligence and Advanced Visual Computing</i>	Paris, France	Sep. 2023 - Present
<ul style="list-style-type: none">• GPA: 3.67/4.0• Coursework: Machine and Deep Learning, Image Analysis and Computer Vision, Image synthesis: Theory, Computer Animation, Advanced Machine Learning.• Scholarship: SEMG scholarship.		
École Polytechnique Federal Lausanne (EPFL) <i>Exchange Master Student & Research Intern in IPESE lab</i>	Sion, Switzerland	Mar. 2024 – Sep.2024
<ul style="list-style-type: none">• Coursework: modelling, optimization, design and analysis of integrated energy systems• Title for research: Identify optimal configuration with a machine learning method in multi-criteria decision• Supervisor: Prof. François Maréchal		
Macau University of Science and Technology <i>Bachelor of Science in Software Engineering</i>	Macau SAR, China	Sep. 2019 - Aug. 2023
<ul style="list-style-type: none">• Graduated with an Honor Degree• Coursework: OOP in Java, Algorithms, Mobile Application Development, Data Science, Artificial Intelligence, Data Structures, Software Engineering, Numerical Computation, Management of Information System• Supervisor: Prof. Rubing Huang		

WORK EXPERIENCE

EPFL IPESE lab <i>Research Intern</i>	Sion, Switzerland	Mar. 2024 – Sep. 2024
<ul style="list-style-type: none">• Applying advanced clustering and dimensionality reduction algorithms to preprocess the datasets.• Designing appropriate ML models to train the provided datasets and applying the trained model to generate optimal solutions from the new datasets.• Analyzing the results and providing explanations for any differences observed between data-driven methods and traditional weighting method.• Providing recommendations with a LLM decision-making assistant to the industrial partner regarding preferred solutions and specifying the reasons behind these recommendations.		
Roland Berger <i>Chatbot Engineer (PTA intern)</i>	Beijing, China (Remote)	Feb. 2024 – Apr. 2024
<ul style="list-style-type: none">• Participated in the development of Chatbot for car sales.• Used the coze and dify to create and deploy three specialized agents: Sales, After-Sales, Service.• Ensured the responses from agent is accurate and avoid the hallucination of the Chatbots.		
Volkswagen-Mobvoi information and technology <i>Software Quality Intern</i>	Beijing, China	June 2022 – Aug. 2022
<ul style="list-style-type: none">• Participated in the internal review, improve the quality system of company from version 2.0 to 3.0.• Analyzed and solve 36 software quality problems in Volkswagen ID6 and Audi A6 project.• Ensured the timely delivery of three projects even through the challenging impact of the COVID-19.• Followed the localization projects of Audi, Porsche and Volkswagen etc, timely communicate and negotiate.		

PROJECT

Identify optimal configuration with a machine learning method in multi-criteria decision analysis <i>Research Project in IPESE Lab at EPFL</i>	Mar. 2024 – Sep. 2024
<ul style="list-style-type: none">• Link: https://github.com/MiSFIT5/IPESEinternship• The work in EPFL IPESE lab for data-driven method for decision-making.• Focusing on AI applications in Energy System and Industrial Process.• Dimension Reduction, Clustering, Deep Learning, Reinforcement Learning, LLM Chatbots.	
Navi-UAV <i>INF581 Project in Ecole Polytechnique</i>	Jan. 2024 – Mar. 2024
<ul style="list-style-type: none">• Link: https://github.com/172698691/INF581-Project	

- Implemented Reinforcement Learning (DDPG) to enable UAVs to navigate through dynamic and uncertain environments efficiently.

Real-Time AI for StarCraft

INF584A in Ecole Polytechnique

Jan. 2024 – Mar. 2024

- Link: <https://github.com/MiSFiT5/Real-Time-AI-for-Star-Craft-Based-on-BWAPI>
- Implemented Reinforcement Learning (DDPG) to enable UAVs to navigate through dynamic and uncertain environments efficiently.

Extractive Summarization with Discourse Graphs

INF554 course Project in Ecole Polytechnique

Oct. 2023 – Dec. 2023

- Link: https://github.com/MiSFiT5/INF554_Project
- Dealed with the text and structure of conversation to determine whether it's an important one.
- Implemented GCN, GAT, GraphSAGE(selected), LSTM etc.

Vtuber-Genshin

INF573 course Project in Ecole Polytechnique

Oct. 2022 – Dec. 2023

- Link: <https://github.com/172698691/Vtuber-Genshin>
- Use the MediaPipe and Unity to implement a real-time virtual character follow the face in front of camera.
- The system has a great performance on the head pose estimation and face mesh.
- Shows a great stability and real-time performance.

A Dynamic Detection Approach for Oscillating Loss Problem in DNN based on AUTOTRAINER

Final Year Project in MUST

Sep. 2022 - May 2023

- Link: <https://github.com/MiSFiT5/Dynamic-AUTOTRAINER>
- Identified the pattern of occurrence for the Oscillating loss Bug.
- Reconstructed the previous AUTOTRAINER code to achieve dynamic bug detection.
- it achieved a 50% reduction in time and computational resources for bug detection.
- received an "A+".

ACTIVITY EXPERIENCE

Zhejiang University SDG summer school

July 2023 – Aug. 2023

Students ---- Data Visualization in school of computer science

- Follow the most advanced research paper in the area of Data Visualization.
- Data visualization practical training, project report.
- 48 studying hours, 3 credits.

Chinese Academic of Science summer research camp

July 2020 – Aug. 2020

Students ---- Artificial intelligence and Auto driving

- Understanding of the current status and development of driverless cars and related hardware technologies.
- Artificial intelligence and driverless car practical training, project report.
- Driverless car experiments on path planning

SKILLS & INTERESTS

Technical Skills: Python (Pytorch), C/C++, Matlab, Leangoo, Trello, Machine Learning, Deep Learning, Chatbot Platform.

Scholarships: SEMG scholarship

Awards: National College Students E-commerce Innovation, Creativity, and Entrepreneurship Challenge (**Provincial Second Price**)

Languages: English (Fluent), Chinese/Mandarin (Native), Deutsch(Basic), French(Beginner)

Interests: Basketball, Saxophone, Dragon boat