

Heyuan LIU

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M1 student in Artificial Intelligence and Advanced Visual Computing at École Polytechnique
Research Intern at EPFL IPESE lab

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

Github: <https://github.com/MiSFiT5>

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EDUCATION

École Polytechnique	Paris, France	Sep. 2023 - Present
<i>Master of Science and Technology Artificial Intelligence and Advanced Visual Computing</i>		

- **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.

Ecole Polytechnique Federal Lausanne (EPFL)	Sion, Swiss	Mar. 2024 –Present
<i>Exchange Master Student & Research Intern in IPESE lab</i>		

- **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

Macau University of Science and Technology	Macau SAR, China	Sep. 2019 - Aug. 2023
<i>Bachelor of Science in Software Engineering</i>		

- 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

WORK EXPERIENCE

EPFL IPESE lab	Sion, Swiss	Mar. 2024 – Present
<i>Research Intern</i>		

- 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	Beijing, China(Remote)	Feb. 2024 – Apr. 2024
<i>Chatbot Engineer (PTA intern)</i>		

- 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	Beijing, China	June 2022 – Aug. 2022
<i>Software Quality Intern</i>		

- 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

- 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
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- 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
- Dealt 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.

Artificial Intelligence camp in BUPT

Aug. 2021 – Sep. 2021

Students

- Learn the knowledge in the area of Computer Vision, NLP, etc.
- Design and train the model for specific missions.

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