

Haoxiang Lu

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Education

2024 – 2027	📖	University of Chinese Academy of Sciences (<i>U.S. News Ranking: 54th</i>)
Beijing, China		M.S. in Environmental Engineering, <i>GPA – 3.8/4.0</i> <i>Advisor: Prof. Zhi Qian</i>
		Core Courses: Data Analysis in Environmental Engineering Practice, Mathematical Models of Environmental Engineering and MATLAB Application, Pattern Recognition and Machine Learning , Optimization for Data Science, Introduction to LLMs
2020 – 2024	📖	East China University of Science and Technology (<i>U.S. News Ranking: 533th</i>)
Shanghai, China		B.S. in Environmental Engineering, <i>GPA – 3.3/4.0</i> <i>Advisor: Prof. Juying Lei</i>
		Outstanding Engineer Education and Training Program
		Thesis: <i>Preparation of Ti₃C₂ MXene-based Composites for Photocatalytic CO₂ Reduction</i>

Research Publications

Research Experience

Conferences & Presentations

Jul. 2026	📖	The 6th National Forum	Beijing, China
		Poster Presentation: <i>Optimizing</i>	
Jul. 2025	📖	The 6th National Forum	Beijing, China
		Oral Presentation: <i>Optimizing</i>	

Work Experience


Teaching Assistant

- 📖 **University of Chinese Academy of Sciences** Sep. 2025 - Present
 - Teaching Assistant in *Mathematical Models of Environmental Engineering and MATLAB Application*

Research


- 📖 **Weiqiao National Higher Technology Research Institute** Aug. 2024 - Present
 - Research Assistant
 - Designed and implemented advanced fuzzy predictive control systems for hypergravity desulfurization reactors
 - Developed improved Adaptive Neuro-Fuzzy Inference Systems (ANFIS) to address multivariable coupling challenges
 - Applied particle swarm optimization techniques to enhance multi-objective reactor performance

Work Experience (continued)

-  **Tongji Architecture Design Co., Ltd.**
Research Intern






Jul. 2023 - Sep. 2023
Advisor: Yuting Zhu
- Conducted comprehensive literature review on activated carbon regeneration in water treatment using bibliometric software (*VOSviewer* and *CiteSpace*)
 - Analyzed research trends, collaboration networks, and emerging technologies in the field

Industry

-  **Shandong Weiqiao Pioneering Co., Ltd. (*Fortune Global 500*)**
Process Engineer

Aug. 2024 - Dec. 2024
- Led implementation of innovative hypergravity desulfurization reactors at Zouping Alumina Plant No.3
 - Designed optimized pipeline configurations and instrumentation layout for experimental apparatus with 3000 m^3/h gas processing capacity
 - Achieved 99% H_2S absorption efficiency through process optimization and parameter tuning
 - Developed monitoring protocols that ensured stable system operation for over one year


Skills

Coding	 Python , R, MATLAB, Mathematica, SQL, \LaTeX
AI & ML	 PyTorch , Scikit-Learn , LLMs, XGBoost, CatBoost, Scikit-Fuzzy, Optuna
Software	 SPSS, Jade, Adobe Illustrator, Fluent, Aspen Plus, VOSviewer, OpenLCA
Instruments	 XRD, SEM, TEM, FTIR, Raman, XPS, UV-vis, EIS, EBS, TPC, EDS
Professional Skills	 Research Design, Technical Writing, Data Analysis, Teaching, Presentation

Honors and Recognition


Awards and Honors


- 2024


 **Gold Medal** (Team Member), 49th International Exhibition of Inventions Geneva, for “*High Gravity Selective Desulfurization Technology*”

Scholarships

- 2024 – 2026

 **Graduate Academic Scholarship**, University of Chinese Academy of Sciences
- 2023

 **Outstanding Undergraduate Scholarship**, University of Chinese Academy of Sciences
- 2020 – 2023

 **Merit-based Scholarship** (Third Class), East China University of Science and Technology