

ZHANG Jiayuan

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Education

University of Electronic Science and Technology of China

BA in Communication Engineering. GPA 3.94. Top 5%.

Chengdu, China

Sep 2022 – Jun 2026

Awards: University Scholarship, UESTC (10%)

2023 & 2024

Academic Excellence Award, Glasgow College, UESTC (10%)

2023 & 2024

Watt Innovation Scholarship, Glasgow College, UESTC (15%)

2023

University of Glasgow

Glasgow, UK

Joint Degree. BA in Communication Engineering. GPA 3.94.

Sep 2022 – Jun 2026

Self-preparatory Courses

UC Berkeley CS61A

- Completed key Python programming concepts and advanced course projects.

Structure and Interpretation of Computer Programs

- Developed a Hog game with rules like Sow Sad, Hefty Hogs, and Hog Pile.
- Gained foundational Python skills**, enabling progress to advanced ML/DL courses.

Stanford CS229 Machine Learning (Graduate course)

- Completed 8/20 chapters, focusing on topics like SVM, logistic regression, and regularization.
- Finished all theoretical and programming assignments**, including SVM and Gaussian discriminant analysis.
- Acquired practical experience with model selection, regularization, and error analysis through Python projects.

Dive into Deep Learning by Li Mu

- Studied topics like CNNs, RNNs, Transformers, and optimization algorithms.
- Gained hands-on experience building and optimizing deep learning models, including modern networks and attention mechanisms.

University of Michigan EECS498 Deep Learning for Computer Vision

- Focused on advanced computer vision topics like object detection and segmentation.
- Worked with state-of-the-art architectures such as R-CNN and YOLO.
- Applied modern methods in projects involving real-time object detection and image segmentation.

AI Research at the Brain & Intelligence Lab

Supervisor: Prof. Gu Shi

Denoising Spiking Neural Network

Feb 2024 - Apr 2024

Independent researcher

- Focused on the denoising performance of SNNs, I proposed a pooling layer technique that allows the network to filter out most of the noise.
- Together with temporally efficient training, the newly designed network achieved higher performance, reaching 98% accuracy in the binary classification of augmented 'arm clockwise' and 'arm anti-clockwise' categories on the DVS-CIFAR10 dataset, reaching SOTA accuracy in such binary classification.
- However, the scalability of this technique is limited; it does not work well with larger datasets. Nonetheless, I gained valuable experience in this project.

Investigation into Basic Components of Neural Networks

Apr 2024 - Jun 2024

Independent researcher

- After encountering challenges in a previous project, I focused on deepening my understanding of key neural network components such as Batch Normalization layers, Pooling layers, and Residual connections.
- Explored various approaches to explaining Deep Learning through research papers, covering topics like correlation, mutual information, internal covariance shift, and network degradation.
- Documented my findings and insights in a [blog](#), contributing to the discussion on neural network interpretability.

Kaggle Playground Competitions

Feb 2024 - Apr 2024

Independent researcher

- Participated in multiple Kaggle Playground competitions, tackling practical problems in tabular data, classification, regression, and natural language processing (NLP).
- Leveraged these opportunities to apply newly acquired skills, including XGBoost, self-attention, R-CNN, and BERT, across various real-world datasets.
- Consistently achieved performance similar to SOTA submissions.

Leadership & Activities

Football Club, Glasgow College

UESTC

Vice President

Sep 2023 – Sep 2024

- Led the organization and execution of training programs for new members of the department football team, ensuring they adapted quickly to the team's strategies and dynamics.
- Assisted in developing team tactics and acted as a mentor to junior members, guiding both technical skills and sportsmanship.
- Served as vice-captain during matches, playing a key role in decision-making on the field, boosting team morale, and fostering collaboration among teammates.
- Coordinated team activities and logistics for tournaments, helping to improve overall team performance and cohesion.

Watt Honor Class

UESTC

Class Team Leader

Sep 2023 – Ongoing

- Organized guest lectures featuring distinguished experts to share insights with junior students, resulting in positive feedback and inspiring many students to pursue advanced studies and research opportunities.
- Delivered personal lectures on research methodologies and academic study strategies, providing meaningful guidance that helped students improve their learning efficiency and research skills.
- Coordinated outdoor activities to foster team spirit and collaboration among members, strengthen friendships, and create a supportive class environment.
- Hosted an AI Demystification Workshop, demonstrating the inner workings of AI through live coding sessions, which enhanced participants' understanding of AI and sparked greater interest in the field.
- Provided one-on-one guidance, addressing research-related questions from students after the workshops, offering personalized support that clarified concepts and encouraged further academic exploration.

6-hour Amusing Soul Fansub

UESTC

Leader

Sep 2023 – Sep 2024

- Led and supported a team of dedicated members in creating high-quality subtitles for popular English videos, ensuring both linguistic accuracy and cultural relevance.
- Provided guidance and linguistic support to team members struggling with post-listening interpretation, helping to enhance the overall quality of the subtitles produced.

- Facilitated team collaboration and motivated members through challenging projects, fostering a positive working environment.
- Contributed to the growth of the fansub's Bilibili account, which now boasts over 20k followers, thanks to the consistent efforts of current and former team members.

Skills & Interests

Technical: Proficient in Python related to deep learning (*Pytorch, numpy etc.*); Familiar with basic Linux and git commands.

Language: I scored 8.0 in IELTS, demonstrating a full capability to overcome language barriers in academic settings.

Interests: Computer Vision, 3D Computer Vision, Reinforcement Learning, Deep Learning.