

Haoqin Hong

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EDUCATION

- Southwest University (SWU)** Chongqing, China
College: Han Hong (Honours) College
Degree: BSc in Computer Science and Technology
GPA: 4.1/5.0 **Weighted Average Score:** 90.1
September 2021 – July 2025
- University of California, Los Angeles (UCLA)** Los Angeles, USA
Project: Credits Transfer Project in Data Science (Visiting Student) *September 2022 – December 2022*
Courses: Introduction to Data Science (A), Data Science Fundamentals (A-), Machine Learning with Python (A+)

PUBLICATIONS

- Haoqin Hong**, Yue Zhou, Xiangyu Shu, Xiaofang Hu, “CCSPNet-Joint: Efficient Joint Training Method for Traffic Sign Detection Under Extreme Conditions.” **(Submitted to ICASSP 2024)**

INVENTION PATENTS

- Yue Zhou, He Xiao, Xiaofang Hu, **Haoqin Hong**, Shukai Duan, “Voice Recognition System and Method Based on Lightweight Transformer Network”, Chinese Invention Patent.
- Yue Zhou, He Xiao, Xiaofang Hu, **Haoqin Hong**, Shukai Duan, “Memristor-based Text Emotion Detection System and Method”, Chinese Invention Patent.

HONORS AND AWARDS

- Southwest University Undergraduate First Class Scholarship (Rank 1/40). *Oct 2023*
- Southwest University Undergraduate Third Class Scholarship (Rank 10/40). *Oct 2022*
- Special First Class Scholarship for Overseas Study or Internship of Han Hong College. *Nov 2023*
- Southwest University Academic Science and Technology Award. *Oct 2023*
- Outstanding Student Union Staff of Han Hong College. *Jul 2022*

RESEARCH AND INTERNSHIP EXPERIENCE

- Brain-like Computing and Intelligent Control Laboratory** Chongqing, China
Undergraduate Research Assistant *March 2022 – Present*
 - Research Background:** I joined the algorithms research group formed by Professor Xiaofang Hu, Associate Dean of the School of Artificial Intelligence at Southwest University, with a focus on the design of brain-like intelligence algorithms and their deployment on memristor chips.
 - Research Direction:** Computer Vision, Embedded Vision, Brain-like Computing, Memoristor Neural Networks (Advisors: Xiaofang Hu, Yue Zhou).
- Institute of Automation, Chinese Academy of Sciences** Beijing, China
AI Algorithm Research Intern (Part-time Assistant) *August 2022 – September 2022*
 - Internship Content:** During my internship, I primarily utilized the PaddlePaddle deep learning platform from Baidu to reproduce and port cutting-edge neural network algorithms in the fields of computer vision and natural language processing. Additionally, I conducted research on text-to-vision cross-modal techniques and applications. By carefully studying the papers and open-source code of these algorithms, I successfully constructed corresponding models in the PaddlePaddle framework and made necessary adjustments and optimizations to achieve good performance and results.

PROJECT EXPERIENCE

- Chinese Academy of Sciences College Student Innovation Training Program** Beijing, China
National Astronomical Observatories (Advisors: A-Li Luo) *July 2023 – Present*
 - Project Title:** Image Processing, Object Recognition, and Segmentation Based on Astronomical Large Model.
 - Project Description:** The goal of this project is to utilize a generalized image-based model to address three downstream tasks in astronomical images: identification, classification, and segmentation. To achieve this, the project requires the utilization of Galaxy Zoo’s morphological classifications for galaxies and LAMOST’s spectral classifications for stars and quasars to enhance the large-scale model through reinforcement learning. Subsequently, fine-tuning will be applied to SDSS sky survey images to accomplish tasks such as object detection, object classification, and image segmentation.
- Provincial-Level College Student Innovation Training Program** Chongqing, China
Project Leader *March 2023 – Present*
 - Project Title:** Research and Application of Multi-Layer Attention Networks based on Memristors.
 - Project Description:** This project aims to utilize the memristor-based multi-layer attention network algorithm to provide a novel neuromorphic computing architecture in natural language processing. It aims to provide feasible algorithmic models and deployment plans for achieving a low power consumption, high computational power, and integrated storage and computation neuromorphic computing system.

- University-Level College Student Innovation Training Program**

Chongqing, China

March 2022 – May 2023

 - Project Leader*
 - Project Title:** Artificial Intelligence Suicide Intervention and Big Data Positive Psychological Suggestion Content Delivery System.
 - Project Description:** The goal of this project is to design and implement a suicide semantic analysis model based on deep learning methods and natural language processing techniques. Additionally, a suicide behavior identification semantic analysis database platform will be developed. Through this platform, the aim is to enhance the accuracy and efficiency of suicide intervention.

COMPETITION AWARDS

- Bronze Medal in Kaggle Research Competition: Google - Fast or Slow? Predict AI Model Runtime.

Nov 2023
- National First Prize in the China Robotics and Artificial Intelligence Competition.

Jun 2023
- National First Prize in the DJI RoboMaster of the National College Student Robot Competition.

May 2023
- National Second Prize in the China/Contemporary Undergraduate Mathematical Contest in Modeling.

Nov 2023
- National Third Prize in the Chinese Collegiate Computing Competition.

May 2023
- Provincial First Prize in the National Undergraduate Electronics Design Contest.

Aug 2023
- Provincial First Prize in the China/Contemporary Undergraduate Mathematical Contest in Modeling.

Nov 2022

SKILLS SUMMARY

- **Language:** CET-6(565), IELTS(6.5)
- **Programming:** Python, R, C/C++, Matlab
- **Tools:** Ubuntu, OpenCV, PyTorch, ROS, SLAM Navigation, C++ STL

EXTRACURRICULAR EXPERIENCE

- Southwest University Robotics Innovation Lab**

Chongqing, China

 - Vision and Decision Algorithms Team Leader*

November 2022– Present
- Southwest University Student Union**

Chongqing, China

 - Head of Life Practice and Rights Department*

October 2022 - July 2023