

HAO-YU WANG

E-mail Address randall_hy@163.com

Address Nanjing, Jiangsu Province, 210000

Phone Number +86 18119502680

Country P. R. CHINA

EDUCATION

- Anhui Agricultural University**

Hefei, P. R. CHINA

B.E. in Computer Science & Technology, GPA:88.78/100

09.2020 – 06.2024

IELTS score:7.0 Ranking:2/423

SKILLS & TECHNIQUES

Professional Skills

- Python, C/C++, MATLAB, SQL, HTML
- Deep Learning (CNN, LSTM, Transformer); Machine Learning (SVM, XGBoost, Random Forest)
- Large Language Model Testing and Data Processing
- Linux (Ubuntu), Docker, Kubernetes, Visualization, Nginx

PUBLICATIONS

Articles

Haoyu Wang*, Youhua Zhang, Liu T, et al. MFBP-UNet: A Network for Pear Leaf Disease Segmentation in Natural Agricultural Environments[J]. *Plants*. (1st Author) DOI. [10.3390/plants12183209](https://doi.org/10.3390/plants12183209)

Haoyu Wang*, Positive-Samples Contrastive Clustering in Single Cell RNA-seq Data[J]. (2nd Author) *Under Review & Minor Revision*

Patents

Haoyu Wang*, et al. A Method & Device for Extracting Yeast Transcription Factor-gene Relationship in Biological Text [Patent]. 1st Inventor, Substantive Examination Stage.

Haoyu Wang*, et al. Tomato Disease Detection Method & System Based on Hybrid Self-attention Mechanism [Patent]. 2nd Inventor, Substantive Examination Stage

Haoyu Wang*, et al. Deep Learning-Based MRI Image Recognition Method & Device [Patent]. 2nd Inventor, Substantive Examination Stage

RESEARCH EXPERIENCE

Project: MFBP-UNet: A Network for Pear Leaf Disease Segmentation in Natural Agricultural Environments

Position: *Team Leader, 1st Author*

07.2022 – 07.2023

Description:

- Proposed a pear leaf disease segmentation model based on multi-scale feature extraction and dynamic sparse attention.
- Participated in the scientific research project of Anhui Beidou Precision Agriculture Information Research Center.
- Accepted by *Plants* (SCI, JCR Q1, 1st Author) in July 2023.

Project: Positive-Samples Contrastive Clustering in Single Cell RNA-seq Data

Position: *Team Leader, 2nd Author*

05.2023 – 05.2024

Description:

- Responsible for clustering analysis of single-cell RNA sequencing data.
- Proposed a clustering method based on positive sample contrast loss function.
- As a 2nd Author, submitted to SCI, JCR Q3, and gained “Minor Revise” feedback.

Project: Tomato Disease Detection Method & System Based on Hybrid Self-attention Mechanism

Position: *Team Leader*

07.2023 – 04.2024

Description:

- Designed a tomato disease detection method and system based on hybrid self-attention mechanism.
- Achieved rapid prediction of tomato disease types.
- Received as an Invention Patent (2nd Inventor, Notification that Patent Application for Invention Entering the Substantive Examination Stage.)

Project: A Method & Device for Extracting Yeast Transcription Factor-gene Relationship in Biological Text

Position: *Team Leader*

07.2023 – 04.2024

Description:

- Utilized the basic triggered memory flow framework to realize joint automated extraction of yeast transcription factor-gene relationships.
- Received as an Invention Patent (1st Inventor, Notification that Patent Application for Invention Entering the Substantive Examination Stage).

Project: Deep Learning-Based MRI Image Recognition Method & Device

Position: *Team Leader*

07.2023 – 04.2024

Description:

- Developed deep learning-based MRI image recognition method.
- Improved diagnostic accuracy by reducing image blurriness.
- Received as an Invention Patent (2nd Inventor, Notification that Patent Application for Invention Entering the Substantive Examination Stage).

Project: AIoT-based Smart Water Measurement & Control Machine

Position: *Team Leader*

07.2023 – 04.2024

Description:

- Led the College Students' Innovative Entrepreneurial Training Plan Program.
- Developed a full-stack IoT monitoring, early warning and emergency response system using AIoT technology.
- Designed a city management solution with comprehensive perception, intelligent computing, rapid response and social service.

PROFESSIONAL ASSOCIATION

- **China Computer Federation** Student Member

SELECTED AWARDS AND HONORS

- Outstanding Graduates of Anhui Province 06.2024
- National-Level 1st Prize, Chinese Collegiate Computing Competition 08.2023
- National-Level 3rd Prize, Chinese Collegiate Computing Competition 08.2023
- National 2nd Prize, “Huawei Cup” National College Students Internet of Things Design Competition 09.2022
- National 2nd Prize, China Undergraduate Physics Experiment Competition 12.2021
- University-Level 1st – Class Scholarship 2022&2023