Rongkun Zhu

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EDUCATION

Xidian University Sep 2021 – Jun 2025

- Relevant Coursework: GPA:3.5/4, Specialty Experiment of Artificial Intelligent **(98)**, Cognitive Computing **(95)**, Programming **(95)**, Deep Learning **(94)**, Image Processing and Machine Vision **(94)**, Labor Practicing **(Excellent)**.
- Honors/Awards: National Computer Design Competition: **National Award** (2024); National Statistical Modeling Competition: **Gold Award in the Shaanxi Province** (2023); The Third Prize Scholarship (2022-2023); Industrial Engineering Improvement Creativity Competition: **Gold Award in School-Level**(2024); **Computer Software Copyright**: Intelligent Fault Operation and Maintenance System under Variable Conditions (2024).

SKILLS LIST

- Professional Skills: Proficient in Python programming, well-versed in common machine learning and deep learning networks, experienced in building, training, and testing networks using the Pytorch framework; proficient in LaTeX; familiar with R language and adept at common data analysis and visualization methods.
- English Proficiency: IELTS score of 7.

RESEARCH EX EXPERIENCE

Palm Detection in Ecuadorian Tropical Forest Jan 2024 – Present

Primary Contributor

- Project Description: Utilizing a novel palm dataset, this project addressed the challenges of detecting and classifying palms under complex conditions with a forest background.
- Main Contributions: Responsible for segmenting and converting collected TIF images into a usable dataset; conducted rigorous comparative experiments on State-of-the-Art models of various scales and architectures on the new dataset, including the YOLO series and ViT; evaluated the performance of different models on this dataset using multiple metrics, authored a paper analyzing the strengths and weaknesses of the models in complex backgrounds.

Contrastive Learning Framework for Planet and WorldView Imagery Feb 2024 – Present

Participant

- Project Description: Developed a framework based on Ial-SimSLR for multimodal and multi-resolution contrastive learning to analyze Planet and Worldview satellite images, aiming to convert images between these two types of satellites.
- Main Contributions: Proposed a new network architecture and was responsible for building the network; contributed to the writing parts of the paper.

Few-Shot Time Series Classification Mar 2023 – Oct 2023

Participant

- Project Description: Developed a novel learning framework capable of efficiently classifying time series data, addressing the challenges of data scarcity and the need for large annotated datasets with minimal training samples.
- Main Contributions: Responsible for the experimental section, testing our model against traditional methods across multiple datasets, comparing the amount of training data required to achieve the same accuracy.

Publications

- Wenxuan Wang, **Rongkun Zhu**, Dan Wang. ‘MSFT: Leveraging Manifold Transformation and Multi-scale Convolutional Neural Network for Few-Shot Time Series Classification’. TPAMI (2023). (Under Review)
- **Rongkun Zhu**, Kangning Cui.’ Palm Detection and Classification in Forest Environments Using Advanced Models’ (Pending Submission)
- Kangning Cui, **Rongkun Zhu**. ‘Multi-Modal and Multi-Resolution Contrastive Learning for Planet and World-View Images’ (Pending Submission)

LEADERSHIP EXPERIENCE

- Represented the college in the university-wide Top Ten Class Defense Competition.
- Served as the captain of the Institute football team, leading the team to achieve 2ed and 3rd place consecutively for 2 years.