YANG HU

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EDUCATION

New York University Sep. 2024 - Jun. 2026
Master of Science, Computer Science
University of California, Santa Barbara Sep. 2020 - Mar. 2024
Bachelor of Science, Mathematics/Statistics and Data Science Major GPA: 3.75, CS GPA: 3.94

SKILLS

Languages	Fluent with Python, R; Proficient with SQL, C++; Experienced with HTML/CSS, HUGO
Frameworks	PyTorch, TensorFlow, OpenCV, Scikit-Learn, Langchain, Ollama, CUDA, Spark
Tools	Google Cloud Platform, AWS, Redis, Git, SVN, Shell, LaTeX

EXPERIENCE

R&D Software Engineering Intern May. 2024 - Aug. 2024
Unity *Shanghai, China*

- Scaled the RAG database for Unity's AI assistant, Muse Chat, by developing a workflow that systematically gathers inputs from various Unity forums and enhances data quality with an LLM pipeline.
- Created MuseBench, a system using LLM-as-a-judge along with a benchmark dataset to evaluate the AI agents, achieving a 95% reduction in time required for assessment processes while minimizing human labor.
- Developed a pipeline with a locally deployed LLM to extract the key error messages from Unity Cloud Build log files that typically exceed 100k lines.

Machine Learning Undergraduate Researcher Jun. 2023 - Mar. 2024
The WAVES Lab, University of California, Santa Barbara *Santa Barbara, CA*

- Deployed deep learning models for image segmentation on large-scale satellite imagery.
- Proposed a computationally efficient model to address segmentation challenges in environmental remote sensing.
- Awarded Schmidt Family Foundation Research Mentorship Award.

Computer Vision Lab Research Assistant Jun. 2022 - May. 2023
School of Data Science & Engineering, East China Normal University *Shanghai,China (Remote)*

- Cleaned and customized various computer vision datasets with OpenCV and Scikit-Image.
- Fine-tuned various CNN/transformer models for Image Super-Resolution using GPU-accelerated computing.

PROJECTS

Semantic Segmentation by Pixel-level Time Series Classification Jan. 2023 - Mar. 2024

- Implemented various pixel-level time series classification models utilizing satellite data from Google Earth Engine.
- Evaluated the transferability and adaptability of the trained model across various locations and timeframes.

Few-shot Instance Segmentation for Remote Sensing Jun. 2023 - Dec. 2023

- Developed a novel Strategy named STC leveraging the Segment Anything Model and Vision Transformer for instance image segmentation in remote sensing, reducing manual labeling and training costs by 70%.

Efficient Visual Attention Design for Image Super-Resolution Jun. 2022 - May 2023

- Replicated and analyzed 16 Super-Resolution models to assess key characteristics of successful models.
- Collaboratively designed a CNN-based model that achieved state-of-the-art performance while reducing parameter count by 85% through the innovative use of efficient visual attention mechanisms.

PUBLICATIONS

[1] Zhijian Wu, Jun Li, ***Yang Hu***, Dingjiang Huang."Compacter: A Lightweight Transformer for Image Restoration". ACM Multimedia, 2024.

[2] ***Yang Hu***, Kelly Caylor, Anna Boser."Segment-then-Classify: Few-shot instance segmentation for environmental remote sensing". NeurIPS Workshop on Tackling Climate Change with Machine Learning, 2023.