YANG HU

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EDUCATION

University of California, Santa Barbara — Santa Barbara,CA
Bachelor of Science, Mathematics/Statistics and Data Science — Sep. 2020 - Mar. 2024
Fellowship: Schmidt Family Foundation Research Mentorship Award — Oct. 2023
Relevant Coursework: Linear Algebra, Data Structures and Algorithms, Algorithms Engineering, Deep Learning, Statistical Machine Learning, Statistical Data Science, Probability and Statistics, Time Series, Regression Analysis, Applied Stochastic Processes, Real Analysis, Big Data Analytics, Differential Geometry, Financial Mathematics

SKILLS

Languages	Fluent with Python, R; Proficient with C++, SQL; Experienced with HTML, CSS, HUGO
Frameworks	Pytorch, Tensorflow, Scikit-learn, Spark, Pandas, Numpy/Sci-py, Matplotlib, Seaborn
Tools	Git, Shell, LaTeX, Markdown, Excel, Adobe Photoshop, Illustrator

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.
- Studied the transferability and adaptability of the trained model across different locations and time periods.

Few-shot Instance Segmentation for Remote Sensing — Jun. 2023 - Dec. 2023
- Developed a novel Segment-Then-Classify Strategy leveraging the Segment Anything Model and Vision Transformer for instance segmentation in remote sensing, reducing manual labeling and training costs.
- Presented the first-author paper at the NeurIPS 2023 Climate Change AI Workshop in New Orleans.

Time Series Forecasting of U.S. Candy Production — Sep. 2023 - Nov. 2023
- Applied Box-Cox transformation and differencing to achieve stationarity in the time series dataset and identified optimal SARIMA model using ACF and PACF analysis and Maximum Likelihood Estimation.
- Validated the model through comprehensive diagnostic tests and spectral analysis.

Efficient Visual Attention Design for Image Super-Resolution — Mar. 2022 - May 2023
- Replicated and analyzed 16 Super-Resolution models to assess key characteristics of success 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.

Soccer player transfer market value prediction — Sep. 2022 - Jan. 2023
- Constructed and fine-tuned 8 ML models including KNN, Random Forest, and Gradient-boosted Trees.
- Reported on the model results and exploratory data analysis leveraging R markdown.

EXPERIENCE

Bren Environmental Diversity Leaders and Internship Program — Jun. 2023 - Sep. 2023
University of California, Santa Barbara — *Santa Barbara, CA*
- Implemented an instance segmentation model for automated mapping of center-pivot irrigation systems in Sub-Saharan Africa for a deeper understanding of irrigation adoption and its impacts in the region.

Deep learning Lab Research Assistant — Jun. 2022 - Aug. 2022
East China Normal University — *Shanghai,China*
- Trained and fine-tuned various CNN and transformer models for Image Super-Resolution and led a comprehensive ablation study to evaluate and refine the proposed architecture.
- Submitted two co-authored papers to ICME 2024 and 38th AAAI.

LEADERSHIP

Lead Event Planner, Chinese Students And Scholars Association, UCSB — Dec. 2020 - Dec.2023
- Organized Freshmen Orientation Carnival, "GauchoKill" (Board Game Championship), and "GauchoDate".