Jingxuan li

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Education

BS **University of California, Los Angeles**, Math of Computation — CA, USA
Sep. 2021 to Jun. 2025

- GPA: **3.98**/4.0
- Coursework: Machine Learning, Optimization, Numerical Methods, ODEs, Real Analysis, Complex Analysis, Advance Programming in C++, Statistics, Numerical methods, Probability theory, Math modeling, Computer Graphics.
- Honors: UCLA the Oda Abe **Scholarship** (Jun.2024), Dean's Honors List (2021, 2022, 2023, 2024)

Publications

Quantifying Preferences of Vision-Language Models via Value Decomposition in Social Media Contexts
Jingxuan Li, Yuning Yang, Shengqi Yang, Yizhou Zhao, Ying Nian Wu
Under Review

Research Experience

UCLA, Researcher on VLM's latent and induced persona, — CA, USA
Advisor: Prof. Ying Nian Wu — Sep. 2023 to now

- Curated a **vectorized image dataset** from social media shorts using an automated **GUI-based pipeline**, capturing and processing screenshots for benchmarking.
- Benchmarked and analyzed the sentiment preferences of VLMs based on Schwartz's 10 Value Dimensions, evaluating models such as **Claude 3.5**, **Gemini 1.5**, **GPT-4o**, **Blip 2**, and **CogVLM**.
- Designed a pipeline in **inducing VLM personas** and evaluating their role-playing abilities through alignment with social media recommendation systems.
- Developed advanced Inductive Scoring Questionnaire (ISQ) **prompting strategies** to enhance the performance of role-playing VLMs.

Internship Experience

Tencent, Big Data researcher, Intern (CSIG - Cloud & Smart Industries Group) — Beijing, China
Aug. to Sep. 2024

- Conducted research on geolocation optimization, utilizing **NLP** methods such as **jieba** and **ckip-transformers** to match WiFi-SSID and store names for precise geolocation.
- **Fine-tuned** the HunYuan-7b model on a constructed dataset, achieving enhanced accuracy for geolocation tasks.
- Designed and implemented a pipeline integrating the matching algorithm into **Tencent Maps**, significantly improving geolocation accuracy in industrial applications.

Tencent, Technical Researcher, Intern (CSIG - Cloud & Smart Industries Group) — Beijing, China
Jul. to Sep. 2023

- Designed and implemented **mathematical algorithms** to detect inconsistencies in apartment geological data, ensuring data accuracy.
- Optimized algorithm efficiency in **python**, reducing time and space complexity to enhance system performance.

Projects

COVID-19 and Travel Pattern Nov. 2024

- Discovered connections between Travel patterns and COVID-19 case trends
- Written data critique and constructed a narrative on how different state's travel restrictions and policies interplay with the spread of influenza
- Created a **Website** on Word Press with Data Visualization using **Tableau** and Time JS

Population Model for Dragon Nov. 2024

- Developed a population growth **model** for dragons using a modified Lotka-Volterra method.
- Solved the system of Ordinary Differential Equations (ODEs) to simulate predator-prey dynamics and tuned the **parameters** to make the model practical.

CNN on Image Classification Feb. 2024

- Developed a Convolutional Neural Network (**CNN**) system using **ResNet** architecture to perform character identification in the animated series "The Simpsons," achieving high accuracy.
- Utilized **PyTorch** to implement the algorithm for model training and evaluation.

Logistic Regression on Wine Recognition Jan. 2024

- Compared **Stochastic Gradient Descent**, Mini-batch Gradient Descent, and regular Gradient Descent methods for logistic regression in wine classification, optimizing step size for improved convergence.
- Utilized **scikit-learn** to implement the logistic regression algorithm and evaluate performance.

Skills

C++, Python, JavaScript, Matlab, HTML, SQL, PostgreSQL, AWS, Prisma, Milvus, Tableau, LaTeX, Scikit-learn, TensorFlow, Keras, PyTorch, Pandas, NumPy, Matplotlib, Linux, Visual Studio, XCode