

EDUCATION

University of Southern California (USC) Los Angeles, California
B.A. Data Science (Viterbi School of Engineering)
B.A. International Relations and the Global Economy

August 2020 - May 2024
GPA: 3.51/4.0

Honors: Cum Laude, Thematic Options Honors Program, Harman Academy for Polymathic Studies Fellow

National Security Language Initiative for Youth (NSLI-Y) Suzhou, China

June 2019 - August 2019

- Achieved oral and written semi-fluency in Mandarin through a U.S. State Department-sponsored immersion program

TECHNICAL SKILLS

Programming Languages: Python (Scikit-learn, PyTorch, NumPy, Pandas, Matplotlib, Xarray, BeautifulSoup4, Sqlite3, Flask, Transformers), Java, JavaScript, SQL, HTML/CSS, jq

Technologies: Hugging Face, Hadoop DFS, JupyterLabs, PostgreSQL, MongoDB, PySpark, AWS-EC2, Command Line Interface, Github

Machine Learning Methodologies: Multi-modal Architectures, Transfer Learning, Convolutional Neural Networks, Long Short-Term Memory Neural Networks, Transformers, Unsupervised Classification, Natural Language Processing

PROFESSIONAL EXPERIENCE

Research Assistant, USC Climate Dynamics Lab

June 2023 - October 2023

- Improved the utility of a climate time series model using simulations from the Coupled Model Intercomparison Project (CMIP) in collaboration with PhD students
- Created a pipeline using a parallel processing script, enhancing computational efficiency and data readability
- Identified and queried geospatial climate data from 25,000+ simulations via Google Cloud server
- Normalized variability in the data and assessed 30 features to increase model accuracy

Research Assistant, USC Esports (USC Department of Mathematics)

July 2022 - October 2022

- Attained an accuracy exceeding 65% for a logistic regression machine learning model, predicting winning positions of player compositions through a partnership with mathematics and computer science professors
- Gathered data on 35,000 professional League of Legends games using Beautiful Soup and Pandas in Python
- Researched and provided insights on in-game player statistics, effectively enhancing the accuracy of the algorithm
- Led and organized team meetings to drive focus and discussion, increasing time efficiency to complete goals

TECHNICAL PROJECTS

Particulate Matter (Air Quality) Deep Learning Model

- Directed the design and deployment of a Convolutional-LSTM model forecasting air quality with 80% accuracy
- Established a pipeline to download and normalize over 1 TB of multi-dimensional time series data from a data lake onto a computing cluster, boosting the upload rate by 300%
- Accelerated computation processes by 400% using CUDA and GPU kernels for efficient training evaluations

Pixel NoSQL

- Developed a user-friendly Flask dashboard for JSON object management and CRUD functionality in a MySQL database
- Designed an HTML/Bootstrap frontend, ensuring seamless integration with backend systems

MusicaHub: A Dynamic Music Discovery Platform

- Built a music discovery web app with Spotify REST API to dynamically visualize global music trends in real-time
- Implemented distinct user permission states, tailoring access controls to grant administrative privileges and define user capabilities within the application using a PHP and SQL backend
- Designed and developed the home page UI layout with Adobe After Effects, resulting in a user-friendly interface that effectively communicated the technology's message and improved the overall user experience

RELEVANT COURSEWORK

Machine Learning, Data Management, Statistics, Data Science, AI for Sustainability, Data Visualization, Deep Learning (Master's level), Advanced Python, Java, Full-Stack Web Development, Data Privacy for Security, Leadership with former U.K. Prime Minister Gordon Brown