

EDUCATION

University of Southern California

Master of Science, Spatial Data Science 3.85

Expected May 2025

Chinese University of Hong Kong, Shenzhen

Bachelor of Science, Data Science and Big Data Technology

Li-Yun Scholarship

August 2019

KEY WORDS & APPLICATIONS

Generative AI, Prompt Engineering, Natural Language Processing, LLM, Deep Learning, Machine Learning. Python (Torch, TensorFlow, Keras), Langchain, Chatdev, Esri ArcGIS (Pro, Script Tool)

RECENT RESEARCH AND WORK EXPERIENCE (SELECTED)

University of Southern California - Research Assistant of Economics

April 2024 – Present

- Applied multiple machine/deep learning algorithms including **XGboosting**, **Attention**, **Mixture NN** etc. to predict travel time based on travel mode and distances and reduce the MSE to 200 on 4M data.

Shenzhen Research Institute of Big Data - Research Assistant of Operation

November 2022 to May 2023

Institute that focuses on research and applications of Big Data. Developed enhanced spatial operational algorithms.

- Implemented a variable neighborhood search sim-heuristic algorithm to solve the multi-period inventory routing problem under stochastic spatial distribution and demands in 30 minutes on small scale
- Constructed a distributed decision model based on the stochastic demands, fulfilling regular deliveries on the service level and tracking inventory with a preset standard
- Implemented a branch and bound algorithm based on the Hungarian method in combination with a simplex method for complex networks to minimize the costs of a project to build a decision model for the project managers, decreasing the time cost by around 15%

Byte Dance-AI Engineer Intern

May 2022 to June 2022

Internet tech co. that operates machine learning-enabled content platforms to developed AI algorithms

- Built an Intelligent Agent based on **LangChain**, **RAG** and **LLM** to accomplish tasks such as parsing and understanding fund announcement data, answering user questions by multi-modality and accomplished the **Prompt Engineering** based on **CO-STAR** principles.
- Implemented handwritten digits recognition with **TensorFlow**, the Sequential model in **Keras**, and a convolutional neural network based on dark-channel enhanced images
- Identified illegal messages on given websites with a **Naive Bayes** classifier achieving around 75% accuracy

ZZNode Technology- Database Engineer Intern

March 2022 to May 2022

Internet tech co. that provides database services. Managed entities in databases and conducted SQL data analysis

- Utilize SQL for database maintenance in real-world scenarios. Write modules for managing databases using Python for efficient handling of internal requests