

Siying Liu

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Education

Northwestern Polytechnical University

Bachelor of Science in Computer Science

Sep.2020 – June.2024

Xi'an, China

University of Alberta

Master of Science (Crse) Computing Science Multimedia

Sep.2024 – Present

Edmonton, Canada

Experience

Data Analyst

Fangen Intelligent Technology

Oct 2021 – May 2022

Xi'an, China

- Collect and analyze three-dimensional data of human falls in various postures.
- Evaluate the accuracy and precision of different algorithms in detecting falls

Undergraduate Research Assistant

Northwestern Polytechnical University

Oct 2021 – Jun 2022

Xi'an, China

- Designed and implemented a deep learning-based fake news detection model
- Contributed to financial news entity recognition and sentiment analysis, focusing on company recognition.
- Assisted in the design of a text style transfer model, including data preparation and algorithm improvement.

Projects

Library Management System | *Flask, Vue3, elements-plus, axios*

Nov 2022

- Built the interface with Vue.js and Element Plus, using Axios for API integration.
- Developed a RESTful API with Flask for managing book data.

Identifying Companies and Sentiment in Financial News | *Python, Pytorch, Flask, MySQL*

February 2023

- Was mainly responsible for extracting strongly associated company entities from financial news and improving accuracy.
- Used the pre-trained language model FinBert, developed in the financial field, to remove redundant information from the original news
- Incorporated company name annotations into the pre-training of the model based on the CIFAR-10 dataset
- Utilized clustering algorithm to determine the category of the company and provide industry category

NFT Copyright Checker | *React, Tailwind CSS, Node.js, Express, MongoDB, IPFS, Solidity*

Jan 2025

- Developed a decentralized copyright protection platform for NFTs. Used IPFS and NFT.storage for immutable, decentralized file storage. Built and deployed Solidity smart contracts to mint and verify NFTs on Ethereum.
- Implemented blind watermarking (DCT-DWT) and perceptual hash to detect duplicates and verify image originality.
- Integrated MetaMask for wallet authentication and on-chain interaction.
- Designed a clean and responsive frontend using React and Tailwind CSS.
- Created backend services with Node.js/Express and managed metadata via MongoDB.

Billboard Music Dashboard | *Terraform, Airflow, dbt, Power BI, GCP*

March 2025

- Built a data pipeline using Terraform, Airflow, and DBT to analyze trending music genres from the Billboard Top Songs Dataset.
- Implemented data ingestion with Terraform, ETL pipeline with Airflow, and data transformation using DBT.
- Deployed the pipeline on Google Cloud (GCS and BigQuery) and visualized insights through an interactive Power BI dashboard.

Food Delivery Platform | *Java, SpringBoot, SSM*

Present

- Developed backend services using SpringBoot and SSM, including RESTful APIs for merchant and user interactions.
- Designed and implemented the database schema (MySQL) to manage merchants, menus, orders, and payments.
- Built the admin panel for merchants to manage orders and menus, and integrated the WeChat Mini Program for user ordering and payments.

Technical Skills

Languages: Python, Java, C/C++, SQL, Verilog HDL, Html, CSS, JavaScript, Matlab

Frameworks: React, Vue, Node.js, Flask, SpringBoot, Pytorch

Developer Tools: Git, Docker, Unity, VS Code, Eclipse, GCP, Azure, PyCharm, IntelliJ, Eclipse, PoweBI