Fengxu Liu

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EDUCATION BACKGROUND

Purdue University West Lafayette, IN
Bachelor of Science in **Computer Science** 08/2020-05/2024

- **Overall GPA:** 3.82/4.0
- **Honors & Awards:** Dean's List & Semester Honors for every semester
- **Related Courses:**
  Programming In C, Computer Architecture, Data Structures And Algorithms, Systems Programming, The Data Mine Seminar I&II, Intro Analysis Algor, Intr To Artifcl Intlgn, Compilers Prin & Pract (Fall 2023), Data Mining & Machine Learning (Fall 2023)

PUBLICATION

Hu, Z., **Liu, F.**, Feng, K., & Xu, S. (2022, October). COVID-19 pandemic prediction using machine learning methods. In *International Conference on Cloud Computing, Performance Computing, and Deep Learning (CCPCDL 2022)* (Vol. 12287, pp. 486-491). SPIE.

RESEARCH EXPERIENCE

DataMine, NLP Model Building and Optimization with Battelle 08/2022-05/2023
Sub-team leader, instructed by professionals from Batelle
First stage:

- Learned background knowledge about artificial intelligence and natural language processing
- Completed the construction and training of the BERT model based on the Transformer model, which could basically understand and classify various terms in the paper
- Carried out fine-tuning and hyperparameter optimization on the model to achieve an average accuracy of 90%

Second stage:

- Designed and implemented a program to collate text data from over 300 biomedical articles to facilitate the training of our newly constructed NLP model
- Optimized the model and achieved 92% accuracy in the classification of the n2c2 dataset (publicly available biomedical data provided by Harvard University)
- Made a Web-based UI for the model to visually highlight the results of classification in articles

COVID-19 Pandemic Prediction Using Machine Learning Methods 08/2021-01/2022
Team leader, instructed by Prof. Victor Adamchik, University of Southern California

- Learned the basic knowledge of machine learning, including basic neural network structures such as RNN and CNN, and specific data analysis algorithms such as linear regression and random forest
- Collected and processed data on temperature and viral infection rates during the COVID-19 pandemic for further model training and testing
- Fine-tuned linear regression and random forest-based models built by other team members, respectively, to improve prediction accuracy about the development trend of the COVID-19
- Co-authored the paper, which was published at the International Conference on Cloud Computing, Performance Computing, and Deep Learning (CCPCDL 2022)

INTERNSHIP EXPERIENCE

ByteDance 09/2023-11/2023

Intern

- Used MySQL and Python to process consumer information in broadcast rooms from different countries/regions and live streaming traffic information, totaling about 320,000 pieces of data
- Analyzed the consumption tendencies of various consumers in the broadcast room and what kind of people could generate higher sales in these areas
- Wrote codes to generate data according to the commercial performance of each product category in each region every day and stored the dataset in an Excel spreadsheet after testing
- Built a random forest model based on the new user information provided by the company to predict what types of goods users are more likely to buy in the broadcast room, with the highest accuracy of 87%

COURSE PROJECT

Pacman Project from UC Berkeley 01/2023-05/2023

- Applied artificial intelligence algorithms to the Pacman game to make Pacman complete tasks including search, tracking, multiagent and reinforcement learning independently under the operation of the algorithm, and got full marks in all modules

Shell Terminal Reproduction 08/2022-12/2022

- Got familiar with the system shell terminal to learn how the computer recognizes the commands entered by users
- Wrote the part of lex and yacc so that the reproduced program could recognize, analyze, and understand the commands entered by the user
- Added other shell features to make the reproduced program more similar to the system shell terminal

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SKILLS

Language Ability: Mandarin Chinese (Native), English (Proficient)

Programming Language: Python, C, Java