Zihao Li

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EDUCATION

Northeastern University *Shenyang, China*

B.Eng. Computer Science *Sep 2019 – Jun 2023*

GPA: 84.7/100

Awards

· Third prize of Liaoning Province in the National Mathematics Competition for College Students *2021*

· Third class Scholarship (top 30% of students in NEU) *2020*

EXPERIENCE

Software Engineer Intern *Suzhou, China*

Maxnet Inc. *Jul 2022 – Aug 2022*

· Worked in the feature analysis group on a crawler project and implemented image crawling and optical character recognition (OCR) to obtain valid information from the images.

· Optimized a feature recognition algorithm and increased the speed by 50%.

Research Assistant *Remote*

North Carolina State University Global Training Initiative *Jan 2022 – Feb 2022*

· Project Title: Modeling the Effectiveness of Quarantine Control in COVID-19 Infection Spread

· Used a combination of mechanistic mathematical modelling with machine learning to study the effects of quarantine policies in controlling the spread of the COVID-19 infection.

· Utilized the classic SIR (Susceptible, Infectious, Recovered) epidemiological model as a based model and an ANN as a universal approximator to model the effects of quarantine control on the spread of the virus.

Summer School Student *Remote*

Peter the Great St. Petersburg Polytechnic University *Aug 2021*

· Final Grade: A (95%).

· Completed a New York City taxi fare prediction project. Imported 54 million lines of data using *Dask* and predicted the results using *XGBoost*. It ranks top 30% on Kaggle.

PROJECTS

Kaggle | Sentiment Analysis on Movie Reviews *Oct 2022*

· Pre-processing text with NITK Toolkit and Regex.

· Created a Bi-Directional LSTM model and trained it to detect sentiment, reaching 80% training and 82% validation accuracy.

Kaggle | Plant Seedlings Classification *Jul 2022*

· Converted RGB image to HSV for removing backgrounds and used Gaussian Blur for removing noise.

· Classified and predicted the plant seedling images with over 90% accuracy using convolutional neural

networks (CNN) built with TensorFlow.
· Created a graphical interface using *PyQt5*, where image files could be selected to get prediction results.

Logistics Information Management App *May 2022*
· Developed an Android application that can parse XML and JSON data from the network.
· Used a local SQL database for CRUD operations.

Analysis of the presidential preference of American voters *Nov 2021*
· Used Pandas to process 75 million votes of American voters to analyze their preferences for presidential candidates.
· Employed third-party libraries such as Matplotlib and Word Cloud for data processing, exploration, analysis, and visualization.

Student Course Selection Management System *Sep 2021*
· Used Java to implement functions such as course selection, course cancellation, teacher scheduling, and educational administration management.

TECHNICAL SKILLS

Programming Languages: Python, Java, C, C++, HTML, CSS, JavaScript
Software Tools: TensorFlow, Scikit-Learn, Keras, NumPy, Pandas, Git, Vue.js, Node.js

COURSERA CERTIFICATIONS

Natural Language Processing in TensorFlow (offered by DeepLearning.AI) *Aug 2022*

Introduction to Data Science in Python (offered by University of Michigan) *Sep 2021*

Python Data Structures (offered by University of Michigan) *Sep 2021*