Shenzhe (Cho) Zhu

1507 50 Brian Harrison Way, Scarborough, ON, M1P 5J4
+1 437-684-8038 | cho.zhu@mail.utoronto.ca | linkedin.com/in/shenzhezhu0531/ github.com/FywOo02

Education

University of Toronto Scarborough Toronto, Canada
Bachelor of Science in Computer Science *Sept 2022 - Current*

- Cumulative GPA: 4.0/4.0
- Relevant Coursework: Introduction to Python, Linear Algebra, Multivariable calculus, Introduction to Probability

Skills

Programming: Python(scikit-learn, Keras, Tensorflow, XGBoost, Pandas, NumPy, Matplotlib, OpenCV), SQL, C
Developer Tools: AWS, Git, MySQL, Jupyter Notebook, PowerBI, Markdown, Latex, Github, JetBrain

Professional Experience

Wuhan Tianyu Education Technology Co. Jun 2023 - Aug 2023
Machine Learning Engineer - Summer Trainee *Wuhan, China*

- Executed the ML workflow with focus on various product price datasets, handling data prepartion, model development and refinement. Achieved an average **prediction score of 74.4%** using **scikit-learn**.
- Conducted comparative experiments on similar product price datasets, identifying **Gradient Boost Regressor** with an outstanding **91%** average prediction accuracy, surpassing other models by **22%**.
- Managed project version control using **Git Bash** and **GitHub**, including clear documentation of experiment results in a **README** file for future maintenance and community accessibility.

Competition

HacktheValley8 | **QuickScan: Paragraph-Scanner** Oct 2023
ML Model Developer *Toronto, Canada*

- Assumed project architecture management, implementing structured file organization to enhance project efficiency and maintain a well-organized system.
- Designed and implemented an image segmentation pipeline utilizing **OpenCV** to extract individual lines of handwritten paragraphs from .jpg images, optimizing the data preprocessing phase.
- Leveraged TensorFlow to develop a Deep Learning model incorporating CNN for feature extraction, **LSTM** for sequence processing, and the **CTC loss** function for accuracy enhancement.

Selected Projects

Daily Stock Price Prediction Notifier | *Python, AWS* (GitHub Link) Aug 2023

- Built a **cloud-based** ML pipeline for **real-time** stock forecasting with **XGBoost** on **AWS SageMaker**. Utilized Managed Spot Training, reducing billable time by **60.7%** during model training, ensuring project cost balance.
- Utilized **AWS Lambda** to fetch prediction results and integrated with **Amazon SNS** for result **email** delivery.
- Employed **AWS EventBridge** to set up timed event triggers for Lambda functions to automate the process.
- Enlisted the assistance of **AWS CloudWatch** to track the model's performance metrics, allowing monitoring of the **RMSE** and enabling rapid adjustments for optimal model performance.

Handwritten Digit Recognizer With GUI | *Python* (GitHub Link) Jul 2023

- Developed an interactive handwritten digit recognition system based on **Convolutional Neural Network**, allowing users to input their own samples for recognition.
- Utilized the **Keras API** in TensorFlow to design the model, achieved model **accuracy of 99.39%** through training with **70,000 images** of hand-written digits from MNIST dataset.
- Achieved **50% less training time** with preserved accuracy via iteration fine-tuning.
- Designed an **interactive** drawing board-based GUI interface by using the **PyQt5** framework.

HR Employee Distribution Analysis | *SQL, PowerBI* (GitHub Link) Sep 2023

- Conducted data cleaning and grouping using **MySQL** on a dataset of **over 22,000** HR employee records from the western region of the United States (2000-2020).
- Leveraged **PowerBI** to create interactive visualizations based on **10+** queried data files, enabling the exploration of data trends and correlations within the HR employee distribution.
- Document all findings and insights from the project to ensure conviction and sustainability of the analysis.