Glen Miasnychenko

Wheeling, IL | 312-927-6827 | glen@miasnychenko.com

Education

Roosevelt University, College of Arts and Sciences | Honors Program | Chicago, IL
Bachelor of Arts in Actuarial Science, Minor in Finance | Expected: December 2024

- Relevant coursework*: Regression & Time Series, Probability Theory, Linear Algebra, Mathematical Statistics, Financial Mathematics*

Work Experience

Jr. AI Engineer | OpticsPlanet | Northbrook, IL | January 2025 – to date
Transformer-Based Recommendation System Development
Key contributions:

- Researched transformer-based recommendation models including SASRec and BERT4Rec architectures
- Developed prototype systems and trained them on MovieLens dataset to compare performance metrics
- Implemented production-ready BERT4Rec training pipeline deployed on cloud infrastructure

Technologies used: BERT4Rec, SASRec, PyTorch, Google Cloud (GC), AWS, Transformers

AI Engineer Intern | OpticsPlanet | Northbrook, IL | Summer 2024
Retrieval-Augmented Generation (RAG) System Development
Key contributions:

- Integrated vector storage with pre-trained sentence-transformer models for document chunking, embedding, and efficient search
- Customized document processing pipeline for Markdown-based Confluence articles
- Build a conversational module utilizing various LLM
- Refined indexing and embedding logic to optimize performance, enabling real-time query responses

Technologies used: PyTorch, OpenSearch, Docker, Confluence API, Flask, Llama3 models, OpenAI API, Sentence-transformers

Related Projects

Neural Network for Microplant Classification | Roosevelt University | Spring 2024

- Collaborated with the Field Museum to classify microplants using a dataset of images provided by the museum
- Developed and implemented a convolutional neural network (CNN) from scratch to perform the classification
- Handled all aspects of data processing, including parsing, cleaning, and downloading images using Python scripts
- Achieved a peak validation accuracy of 65.84% using advanced techniques such as data augmentation, dropout layers, and regularization
- Automated hyperparameter tuning with Hyperband to optimize model performance

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Research on Robinia pseudoacacia | Prague University | Spring 2023
- Assisted with statistical analysis of a peer-reviewed research
- Conducted the Tukey statistical test with appropriate checks
- Performed the analysis using SPSS Statistics and later recreated using R

Walmart Sales Analysis | Roosevelt University | Fall 2023
- Lead a project on modeling the Walmart quarterly sales
- Employed various statistical methods such as Decision Trees, Best Subset Selection (Ridge and Lasso), Forest Model for comprehensive data analysis
- Determined the relationship between the key macroeconomic factors and the Walmart sales

Bookkeeping Application | Personal Project | Fall 2023
- Developed a full-stack personal bookkeeping application using Django framework
- Implemented key features such as transaction tracking, account balance updates and financial summaries with user-friendly interfaces
- Migrated the application to run on a Kubernetes (k3s) cluster, improving scalability and enabling smoother deployment
- Utilized MySQL as the database backend, configured distributed environments, ensuring data consistency and optimized performance
- Dockerized the application for containerized deployment and streamlined application updates

Certifications

IBM Data Science | Coursera | January 2024
IBM AI Engineering | Coursera | August 2024

Awards

Student Laureate | Lincoln Academy of Illinois | October 2024
Selected as a Student Laureate by the Lincoln Academy of Illinois, an honor awarded to one outstanding senior from each college in Illinois for exceptional academic achievement, campus leadership, and community service.

Technical skills

- *Python*
- *Django and Flask*
- *R*
- *Kubernetes (k3s)*
- *MySQL*
- *Docker*
- *Linux Server Administration*
- *OpenSearch and Elasticsearch*
- *Git*
- *Deep Learning*
- *Data Preprocessing*
- *CI/CD*
- *Excel*
- *Golang*