Dana Zarezankova

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Overview: Engineering student graduating in April 2024 with 2 years of work experience seeking full time opportunities in machine learning engineering.

Skills

Programming Languages: 3+ YoE in Python and MATLAB in both academic coursework and industry work experience.
Machine Learning Tools: Proficient in Pandas for data manipulation, scikit-learn for traditional machine learning models, PySpark for distributed data processing, and PyTorch for deep learning.
ML Pipeline Development: Demonstrated ability in all phases of machine learning model development, from ideation to data collection, data scraping, cleaning, feature engineering, model selection, tuning, and performance metrics evaluation.
Healthcare Data: In-depth understanding and application of machine learning techniques in healthcare settings, focusing on fertility predictions, medical record matching, and insurance cost projections.

Experience

Machine Learning Intern May. 2023 – July 2023
Hinge Health *Waterloo, Canada*

- Implemented batch processing for PHI (personal health information) data ingestion and sanitizing to increase data processing speed by 200%, patent in progress.
- Fine-tuned PyTorch model to enhance precision and recall for identifying high insurance cost patients by 10%.
- Leveraged NLP APIs like ChatGPT, Jurassic 2, and Claude LLM to create personalized physiotherapy educational articles, utilizing few-shot prompting via LangChain.

Medical Artificial Intelligence Research Assistant Jan. 2023 – Apr. 2023
University of Waterloo *Waterloo, Canada*

- Designed and developed an end to end medical record matching system employing random forests, XGBoost, and logistic regression.
- Created a Python library to facilitate the export of scikit-learn models to JSON format, making it easier for cross-platform deployments.
- Authored Python libraries for comprehensive processing of medical record data for enhanced matching accuracy.

Data Scientist May – Aug. 2022
Alife Health *San Francisco, USA*

- Achieved a 30% reduction in the Mean Absolute Error of a complex regression model designed for predicting egg retrieval outcomes.
- Conducted a thorough competitive analysis using Monte Carlo simulations to estimate the error margins in competitor models based on their published research.
- Implemented an automated data collection pipeline from the SART online birth rate predictor tool to supplement our existing patient success dataset using Selenium for web scraping.
- Redesigned the intelligent in-vitro fertilization clinic finder using historical data to develop insight into clinic success.

Education

University of Waterloo Waterloo, ON, Canada
Bachelor of Applied Science in Honours Biomedical Engineering *Sep. 2019 – April 2024*

- Degree specialization in medical AI including a capstone engineering project for brain tumor MRI image segmentation.
- Relevant Courses: Data Structures and Algorithms, Linear Signals and Systems, Pattern Recognition, Deep Learning, Image Processing, Computational Neuroscience.
- Served as an academic representative for the class cohort for over 3 years.