

Dana Zarezankova

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Objective: 4th year student seeking opportunities in software engineering and machine learning.

ABOUT ME

Professional Interests: machine learning applications in healthcare

Languages: Python, C++, C#, SQL, MATLAB

Libraries: pandas, NumPy, Matplotlib, scikit-learn, Selenium

Developer Tools: Git, AWS, VS Code, PyCharm, Cypress

EXPERIENCE

Medical Artificial Intelligence Research Assistant

Jan. 2023 – current

University of Waterloo

Waterloo, Canada

- Developing Python libraries to support medical record data processing and secure access.
- Developing and experimenting with a logistic regression model to identify and merge matching medical records.
- Setting up distributed GPU training infrastructure on local machines and AWS.

Data Scientist

May – Aug. 2022

Alife Health

San Francisco, USA

- Reduced mean absolute error of multiple regression model for egg retrieval predictions by 30%.
- Gained insight into competitor products using a Monte Carlo simulation to approximate the error of competitor models using their research accuracy.
- Automated data collection from an online birth rate predictor to enhance our patient success data set using Selenium.
- Redesigned the intelligent in-vitro fertilization clinic finder using historical data to develop insight into clinic success.

Data Scientist

Sept. – Dec. 2021

Alife Health

San Francisco, USA

- Lead the first iteration of an intelligent in-vitro fertilization clinic finder for patients.
- Scraped and cleaned clinic success and patient statistics from the CDC for a clinic ranking system.
- Designed and conducted user interviews with patients to validate a relevant and insightful clinic ranking system.
- Automated web scraping to collect patient review information on doctors and clinics for clinic profile pages.

Software Engineer

Jan. – Apr. 2021

ODAIA Intelligence

Toronto, Canada

- Built and shipped customer loyalty algorithms for Shopify apps in production, serving over 100 stores over 8 months.
- Developed an API that emails targeted marketing campaigns to unique customer segments using AWS Lambdas and Jenkins, saving users \$300-800 per month.
- Applied k-means clustering to Shopify store dataset to find trends in marketing spending using pandas and scikit-learn.
- Improved mapping Shopify customers to marketing dataset using Google Analytics tracking integration.

PROJECTS

Clusters and Classification Boundaries Lab (SYDE 572) | MATLAB

Feb 2022

- Generate normally distributed clusters that match specific class means and covariances.
- Compared minimum and generalized euclidean distance, maximum a priori, and NN and kNN classifiers.
- Compared success with error rates and confusion matrices.

COVID-19 Pandemic Simulation | MATLAB

Apr. 2020

- Used MATLAB for differential equation analysis and visualization.
- Created COVID-19 epidemiological model to observe susceptible, infectious and recovered populations.

EDUCATION

University of Waterloo

Waterloo, ON, Canada

Bachelor of Applied Science in Honours Biomedical Engineering

Sept. 2019 – April 2024

- Relevant Courses: BME 122 Data Structures and Algorithms, SYDE 572 Pattern Recognition