Ramazan Yol

(812) 955-1137 | Bloomington, IN | ryol@iu.edu | LinkedIn | Github

SUMMARY

Ph.D. candidate in mathematics seeking to apply multidisciplinary research background and expertise in statistics and machine learning methods to provide innovative solutions to high-impact problems. Strengths include analytical thinking and the ability to quickly learn new algorithms and methodologies. Actively seeking employment in roles focused on data science, data analysis, and machine learning with the aim of channeling my deep passion for solving data-driven problems and programming into meaningful work.

SKILLS AND CERTIFICATES

- **Languages & Platforms:** Python, SQL, PostgreSQL, R, Git, Github, Tableau, Mathematica, POV-Ray, AWS
- **Python Libraries:** Numpy, SciPy, Seaborn, scikit-learn, Keras, Pandas, Tensorflow, Ruptures, Dash/Plotly
- **Machine Learning:** Data Visualization, Regression and Classification Methods, PCA, Deep Learning, Natural Language Processing, Image Processing
- **Quantitative:** Statistical Inference and Hypothesis Testing, Probability, Graph Theory, Geometry
- **Certificates:** Machine Learning Specialization, Coursera
  Data Science Foundations: Statistical Inference Specialization, Coursera
  The Complete SQL Bootcamp, Udemy

WORK EXPERIENCE

Indiana University Bloomington: Bloomington, Indiana — Aug 2016 – Present
Associate Instructor/Graduate Student

- Instructed courses in Calculus, Linear Algebra, and Finite Mathematics; designed engaging assignments in collaboration with other instructors; provided valuable mentorship to students
- Received **David A. Rothrock Fellowship** award twice for excellence in teaching
- Co-organized and moderated two major geometry-topology conferences and weekly graduate student seminars

The Erdos Institute: Remote — Aug 2022 – May 2023
Teaching Assistant at Data Science Bootcamp

- Responded to student inquiries about Python programming, data collection and analysis, supervised and unsupervised learning, neural networks and guided entry-level fellow participants in accelerated curricula

The Bee Corp: Indianapolis, Indiana — May 2022 – July 2022
Data Science Intern

- Performed research on beehives to acquire comprehensive domain knowledge to engineer innovative features
- Successfully implemented and fine-tuned feature selection algorithms, leveraging techniques such as recursive feature elimination, lasso regression to identify most impactful variables and to optimize model performance
- Created feature representations to significantly enhance hive strength prediction models
- Utilized physics background to identify and rectify conceptual flaw in an existing model

Internship Network in the Mathematical Sciences (INMAS) — Oct 2021 – May 2022
Trainee

- Collaboratively applied core NLP techniques to process extensive movie review datasets, resulting in 82% sentiment analysis accuracy using a Naive Bayes classifier

SELECTED PROJECTS

Sentiment Analysis on Video Transcripts (Personal Project) — Feb 2023

- Developed language-based unsupervised offline change-point-detection algorithm using Python Ruptures library which successfully detects significant moments in conversations
- Conducted quantitative analysis and statistical inference on sentiment analysis utilizing R and Scipy to investigate the influence of personality traits

Predicting Unnatural Death in the U.S. (the Erdos Institute group project) — Dec 2022

- Processed large data sets with imbalanced classes and constructed prediction model to estimate the likelihood of unnatural death among American citizens
- Deployed diverse range of learners, including Weighted Random Forest Classifier, XGBoost, and AdaBoost, achieving f-1 score of 0.65 through careful optimization

Wind Direction and Speed Records Dashboard (the Erdos Institute group project) — Apr 2023

- Designed interactive and visually compelling dashboard by seamlessly integrating wind and temperature data, leveraging advanced functionalities of Python Plotly and Dash libraries
- Efficiently deployed dashboard online, ensuring effective presentation and accessibility of integrated data

PUBLICATIONS

Dihedralization of Minimal Surfaces in the Three Dimensional Euclidean Space — 2022
Two New Embedded Triply Periodic Minimal Surfaces of Genus 4 — 2020

EDUCATION

Indiana University Bloomington, *Ph.D. in Mathematics* — Dec 2023
Bogazici University, *B.S. in Mathematics, B.S. in Physics (Valedictorian)* — May 2016