Farid Karim

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SKILLS

Python, Java, Javascript, C++, R, Google Cloud, AWS Sagemaker, MySQL, Docker, REST APIs, PyTorch
Knowledge: Data Science, Software Development, Machine Learning, Deep Learning, Databases, User Experience

EDUCATION

Boston University, Faculty of Computing and Data Sciences Boston, MA
Data Science M.S. GPA 3.8 exp. Dec 2024

Boston University, College of Arts and Sciences Boston, MA
Computer Science B.A., Economics Minor. Cum Laude. GPA 3.7 May 2023
Relevant Coursework: Data Science, Statistics, Machine Learning, Databases, Cloud Dev

WORK EXPERIENCE

ML Researcher, *Gardos Lab and IVR Group,* Boston, MA June 2023 – present
- Developing large multi-model foundation model for identifying 1,000,000+ Herbaria samples.
- Enhancing user interaction for disabled people using an AI-based device interaction techniques.
- Improved facial feature tracking accuracy and gesture recognition by 50% using 3D feature keypoint coordinates.
- Visualized and analyzed mouse pointer movement and selection out of 1,000,000+ mouse coordinates from 15+ users.

Engineering Intern, *Software Application and Innovation Lab,* Boston, MA Summer 2022 & 2023
- Enhanced linguisting research by engineering a network graph visualization of the ASL lexicon.
- Resolved dependency issues in mobile applications and reduced codebases' sizes by 20%.
- Sped up company analysis by deploying a data pipeline and an internal data dashboard.

Data Engineer, *Smart Solutions*, Baku, Azerbaijan June 2021 – August 2021
- Increased data collection efficiency by 50% via automated web scraping Python scripts.
- Performed sentiment analysis on 50+ social media posts from banks to support market analysis.
- Improved fraud detection success rate in e-tender marketplace by 20% using SQL and automation.

PROJECTS

AirMouse – *personal and ongoing*
- Gives ability to control the mouse pointer via finger pointing and hand gestures using a webcam.
- Supports key points such as index fingertip for mouse movement and pinching for left clicks, and more.
- Performs hand landmark detection using mediapipe, desktop application built in ElectronJS.

Work From Home Study & Analysis of FIOs in MA – *Team Lead @ BU Spark!*
- Analyzed 1,000,000+ rows of worker health data and 10,000+ police FIO data to uncover patterns and biases.
- Findings showed a 60% disparity in police field interrogation rates between minority and non-minority groups.
- Improved data presentation using heatmaps for joint pain and geographic maps for demographic bias.
- Performed multivariate regression analysis to assess and predict workers' mental health and productivity.

Amazon Ratings Predictor – *class project*
- Used boosted trees and forest regressors to classify Amazon review ratings, placing 12th in class at 65%+ accuracy.
- Improved prediction by engineering 10+ new features and sentiment analysis of review contents.

Photoshare – *personal*
- Social media web application - upload pictures, share albums and connect with friends.
- Recommends relevant albums and friends to connect with using tags and specialized SQL scripts.
- Built with Flask and MySQL.