

Syed Faizan, MD

Scarborough, Ontario, Canada

+1 (289) 885 4110 • faizan.s@northeastern.edu • syedfaizaan.com
[in drsyedfaizanmd](#) • [SYEDFAIZAN1987](#)

Profile

Bringing over a decade of experience as a physician, I integrate healthcare domain expertise with advanced skills in data analytics, machine learning, and AI. Currently pursuing a Master's in Data Analytics and Applied Machine Learning at Northeastern University (current GPA 4.0/4.0), specializing in data analysis and visualization, medical imaging analysis, predictive modeling, and AI-driven decision-making.

Qualifications & Skills

- **Strong Expertise in AI and Healthcare:** Skilled in applying machine learning (ML) and artificial intelligence (AI) techniques, with hands-on experience in medical imaging analysis, predictive modeling, and AI-driven decision-making, enhancing clinical insights and healthcare outcomes.
- **Advanced Data Analysis & Visualization:** Proficient in data analytics, statistical modeling, and data visualization using Power BI, Tableau, and Python libraries (Matplotlib, Seaborn, Plotly). Developed interactive dashboards for real-time insights, aiding stakeholders in data-driven decision-making.
- **Project Management & Analytical Thinking:** Demonstrated project management capabilities through leading AI-driven healthcare projects, including scoping, planning, and evaluating outcomes. Exceptional analytical skills for designing models, evaluating performance, and driving impactful results.
- **Technical Proficiency in AI Tools:** Hands-on experience with Python, R, SQL, TensorFlow, PyTorch, and Azure, enabling the development of robust ML models for health-related datasets. Familiar with deployment and optimization strategies in cloud environments.
- **Effective Communication & Collaboration:** Proven ability to communicate complex technical concepts to diverse stakeholders, foster partnerships with healthcare organizations, and support cross-functional teams through well-prepared presentations, reports, and training materials.
- **Research & Academic Writing:** Experience in drafting grant proposals, academic publications, and project deliverables, contributing to health research and public health initiatives. Published in peer-reviewed journals, demonstrating strong scientific writing skills.
- **Problem-Solving & Adaptability:** Quick to adapt to new challenges with a strong problem-solving mindset, evident from successful implementation of AI models in real-world healthcare projects, such as disease prediction models and health data analysis tools.
- **Knowledge of Health Data Considerations:** Familiar with data privacy, security, and ethical considerations related to health data management, ensuring compliance with healthcare regulations in AI model development.
- **Continuous Learning & Innovation:** Motivated by continuous professional development in AI, staying updated with emerging trends in healthcare technology, machine learning advancements, and AI ethics to drive innovation in health AI applications.

Technical Skills

Exploratory Data Analysis, Statistical Modeling, R Supervised, Unsupervised Learning, NLP, Computer Vision, Deep Learning SQL, Python (Pandas, Scikit-learn, TensorFlow, PyTorch, Langchain, MONAI) AWS, Azure Power BI, Tableau, Matplotlib, Seaborn, Plotly, GGPlot

Languages

English (9/9, 8.5/9 IELTS General and Academic), Hindi, Urdu, Kannada, German, Persian, Arabic and French (Reading competence)

Education

Northeastern University

Master's in Data Analytics and Applied Machine Intelligence

Toronto, Canada

2024–2025

Portfolio

Portfolio: My Complete Portfolio

Hugging Face: DrSyedFaizan

Github: SYEDFAIZAN1987

Projects

Medical Imaging Analysis.....

3D Liver Segmentation: Developed a UNet-based model for liver and tumor segmentation from 3D medical images, achieving precise results validated through visual and loss analysis.

Left Atrium Segmentation: Built a U-Net model for cardiac MRI images, achieving a Dice Similarity Coefficient of 0.95.

Cardiac Detection: Implemented a customized ResNet-18 model with PyTorch Lightning for identifying cardiac abnormalities using medical imaging data.

Pneumonia Classification: Built a ResNet-18 based classifier for chest X-ray analysis, achieving 84.5% validation accuracy with CAM visualization.

Generative AI.....

REPP Platform: Developed a web-based app with RAG and FAISS integration for efficient document retrieval.

First Aid Tutor: Built an AI-powered RAG chatbot for medical education with high answer relevancy and correctness.

CommunityServiceBot: Developed an AI-driven chatbot optimized for seniors' community services.

DiabetesDietBot: Created a chatbot for personalized Type 2 diabetes meal plans using RAG and FAISS.

Computer Vision.....

ANN for MNIST: Developed an Artificial Neural Network using PyTorch, achieving 98.5% training and 97.8% validation accuracy.

CNN for MNIST: Implemented convolutional layers with high accuracy of 98% through supervised learning.

Machine Learning.....

Airbnb NYC Analysis: Conducted analysis using regression models, optimizing rental strategies with Tableau dashboards.

Used Car Sales Analysis: Analyzed used car pricing trends and key valuation factors using regression models.

Analyzing Income Inequality Using KNN: Identified key socioeconomic predictors of income inequality using machine learning techniques.

College Type Prediction: Classified U.S. colleges as Public or Private based on tuition, alumni engagement, and enrollment factors using Logistic Regression

College Graduation Rate Prediction: Modeled college graduation rates using regularization techniques to optimize predictor selection and reduce multicollinearity.

Customer Churn Prediction: Designed models addressing class imbalance, achieving an AUC of 0.86 with Random Forest.

Cost-Benefit Dam Analysis: Performed economic feasibility analysis using Monte Carlo simulations.

Inventory Management: Developed EOQ models and linear programming strategies for inventory optimization.

Stock Price Forecasting: Applied time series models for forecasting Apple and Honeywell stock trends.

EV Market Analysis: Created interactive dashboards for electric vehicle adoption trends using R Shiny.

Heart Disease Prediction: Achieved 99.03% accuracy in predicting heart disease using SVM.

Real Estate Modeling: Predicted property values using machine learning for investment strategies using the Nashville Housing Dataset

Loan Approval Prediction: Optimized models for loan approvals with ensemble techniques.

Magazine Subscription Analysis: Analyzed marketing strategies using logistic regression and SVM.

House Price Prediction: Performed feature engineering and regression for predicting housing prices.

Operations Research.....

Transshipment Optimization: Built models minimizing shipping costs and balancing supply-demand.

Inventory Management: Developed EOQ models and linear programming strategies for inventory optimization.

Business Intelligence

Power BI: Developed Dashboards for United Way Greater Toronto on the Financial and Housing stability, Demographics and NGO system in the Greater Toronto Area

Tableau: Developed Dashboards and Analysis for Northeastern University on the Data Science Job Market culminating in a successful presentation

Relevant Work Experience

United Way Greater Toronto (UWGT)

Team Lead, Data Analyst Consultant

Toronto, Canada

Sept 2024 – Dec 2024

Led data analysis and visualization for UWGT under Northeastern University's Experiential Learning course. Developed code in R for Data Analysis, RAG enhanced presentation platform (REPP) for report presentation, and dynamic Power BI dashboards analyzing socio-economic trends in the Greater Toronto Area, covering demographics, financial and housing stability, and community services. Integrated datasets from Statistics Canada and NGOs, utilizing advanced DAX for predictive models on income inequality and housing needs. Awarded 1st rank as Team Lead by United Way Greater Toronto and showcased the project as a poster at the Northeastern University Showcase in December 2024. Demonstrated expertise in data-driven insights, stakeholder engagement, and impactful storytelling through interactive dashboards.

Tarsal Education Technologies

Data Analyst and Scientific Advisor

Toronto, Canada (Remote)

Mar 2024 – Dec 2024

Led NLP projects, extracted insights from educational datasets, and advised on content strategies.

Other Work Experience

Cauvery Hospitals

Resident Physician

Hunsur, Karnataka, India

08/2023 – 12/2023

Department of Community Medicine

Research Assistant

Mysore, Karnataka, India

04/2022 – 01/2023

Cactus Communications Pvt. Ltd

Pharma Regulatory Editor

Remote

10/2021 – 03/2022

Elite Nursing Home

Family Physician

Mysore, Karnataka, India

01/2016 – 12/2020

Ashwini Clinic

Resident Physician

Mysuru, Karnataka, India

10/2011 – 03/2015

K. R. Hospital and Cheluvamba Hospital

Resident Intern

Mysuru, Karnataka, India

09/2010 – 09/2011

Publications

2012: **Abhishekh, H. and Faizan, S.** (2012). *Australian & New Zealand Journal of Psychiatry*. John Cade (1912–1980), pp. 68–69.

2012: **Faizan, S.**, Raveesh, B., Ravindra, L., and Sharath, K. (2012). *BMC Proceedings*. Pathways to psychiatric care in South India and their socio-demographic and attitudinal correlates.

2012: **Faizan, S.**, Raveesh, B., Anjali, V., Lakshmanagowda, Sujatha, R., and Sharath, K. (2012). *BMC Proceedings*. The attitude of non-psychiatry doctors to psychiatry and its correlates in Mysore, South India.