

TAZKERA HAQUE

Austin, TX

[Portfolio Website](#)

Professional Summary

- A seasoned Data Scientist with 6+ years of experience in extracting business insights from large data sets in Healthcare and Finance. Expertise in creating end-to-end Machine Learning Pipelines, DeepLearning, statistical modeling, Python, and data visualization.
- Proven ability to collaborate on cross-functional teams to drive data-driven strategies and enhance operational efficiency, evidenced by developing a cutting-edge Chest X-Ray classifier with deep learning models to detect 14 diseases.
- Known for analytical acumen and effective communication of data insights, evidenced by developing data driven approach with model ensembles to predict customer churn in banking
- Implemented a chatbot featuring text summarization using QLORA and PEFT algorithms for efficient processing by fine-tuning Large Language Models using Falcon-40b on Amazon SageMaker
- Established a comprehensive evaluation blueprint to critically analyze the efficacy of machine learning models, employing metrics including accuracy, precision, recall, ROC-AUC score, ROUGE and F1-score to measure business impact.

Core competencies:

Technical: Python, Pandas, Matplotlib, Seaborn, Scikit-learn, Logistic Regression, Support Vector Machines, Decision Trees, Random Forests, XGBoost, LightGBM, Deep Learning, TensorFlow, PyTorch, AI, Flask, FastAPI, MS SQL, MySQL, PostgreSQL, Spark, MongoDB, Git, GitHub, Docker, CI/CD pipelines, HTML, CSS, Agile, Databricks, AWS, Snowflake, MLOps

Transferable: Curriculum Creation, Effective Stakeholder Communication, Team Collaboration, Professional Mentoring, Thorough Analysis, Commitment to Excellence.

Professional Experience

L&T Technology Services (Radiance Technology), Remote, TX, US (September 2020 to Present)

Machine Learning Engineer (Contract)

- Collaborated within a cross-functional team to enhance data-driven strategies and operational efficiency, leading the development of an advanced Chest X-Ray classifier using deep learning techniques; successfully enabled the detection of 14 distinct diseases, demonstrating cutting-edge application of machine learning in healthcare.
- Demonstrated analytical acumen and effective communication of data insights through end-to-end development of a data-driven approach, utilizing model ensembles to predict customer churn in banking; this initiative not only showcased advanced predictive analytics skills but also significantly contributed to customer retention strategies.
- Implemented advanced deep learning algorithms to enable proactive identification of potential equipment malfunctions, resulting in minimized downtime and substantial reductions in maintenance expenses.
- Skillfully employed Python in conjunction with esteemed frameworks like Scikit-learn, Huggingface Transformers, TensorFlow, Pytorch, and Keras to architect, educate, and fine-tune predictive models.
- Partnered with interdisciplinary teams to seamlessly integrate deep learning models into existing systems via AWS Services, amplifying the productivity and proficiency of maintenance procedures.
- Rigorously adjusted model hyperparameters and leveraged algorithms like Adam and Gradient Descent to enhance predictive precision and dependability, ensuring the rollout of resilient machine learning models.
- Established a comprehensive evaluation blueprint to critically analyze the efficacy of machine learning models, employing metrics including accuracy, precision, recall, and F1-score to measure impact.

Skills: Data Science · Deep Learning · Machine Learning · Natural Language Processing (NLP) · Amazon Web Services (AWS) · Google Cloud AutoML · Scikit-Learn · AWS SageMaker · PostgreSQL · TensorFlow · Cross-functional Team Leadership · Front-End Development · Data-driven Decision Making · Statistical Data Analysis · Technical Presentations.

The University of Texas, Arlington, MA (September 2019 to September 2020)

Graduate Data Science Research & Teaching Assistant

- Lead weekly tutorials and labs for Machine Learning and Deep Learning courses, covering topics like regression models, neural networks, and natural language processing for a class of 100 students.
- Assist faculty in updating and enhancing course materials to include the latest trends and research findings in the fields of Machine Learning and Deep Learning.
- Managed and hosted weekly tutorial sessions, resolving academic challenges for more than 50 students each month, and enhancing academic success. Partnered with faculty to design course curricula and lab research projects aligning with student interests and career goals.
- Manage the software environment, including Jupyter Notebooks and TensorFlow, to facilitate hands-on learning in ML and Deep Learning labs.

University of Massachusetts Amherst, Amherst, MA (September 2017 to May 2019)

Research Assistant in Big Data Analytics in Astronomy

- Engaged in the critical analysis and exploration of contemporary theories in cosmology, contributing to the resolution of key questions in modern cosmology.
- Successfully secured additional research funding and fostered collaboration opportunities, bolstering the university's reputation and research capabilities.
- Introduced a re-scaled pressure integral along the line of sight as a novel measurement method for the SZ effect, significantly elevating the university's research ranking in the field of astrophysics.
- Collaborated with a multidisciplinary team of researchers and scientists to address and resolve critical questions in modern cosmology, fostering a collaborative and innovative research environment.
- Led the evaluation of the potential for integrating theoretical findings with observational data, setting the stage for future breakthroughs in the field of cosmology.
- Developed strategies for the potential application of theoretical findings in real-world observational scenarios, paving the way for future advancements in astrophysical research.
- Documented research findings meticulously, ensuring the generation of high-quality reports and academic papers. Collaborative relationships with other researchers and institutions, promoting knowledge exchange and the development of innovative research methodologies.

Technical Summary

Languages: Python (Pandas, Scikit-Learn, NumPy, Matplotlib, Seaborn), SQL, NoSQL

Artificial Intelligence: Random Forest, Linear Regression, SVM, Decision Tree, Text mining, NLP, ARIMA, TensorFlow, Keras, Sci-kit Learn, Deep Learning Algorithms, FCN, FRCNN, ResNet50, CNN, VGG16, LSTM

Frameworks & Tools: Flask, FastAPI, MS SQL, MySQL, PostgreSQL, MongoDB, Git, GitHub, Docker, CI/CD pipelines, HTML, CSS, Agile, Databricks, AWS, Snowflake

Education and Certification

Physics/ Master of Science (2015 to 2017)

University of Massachusetts Dartmouth, Dartmouth, USA

Physics/ Bachelor of Science (2011 to 2015)

BRAC University, Dhaka, Bangladesh

Certificates

Google Data Analytics Certificate

Machine Learning Specialization - deeplearning.ai

Practical Data Science on AWS Cloud- Deeplearning.AI