

Munavar Hussain

+1(571) 244-0805 | munavarh@vt.edu | [linkedin.com/in/munavarh](https://www.linkedin.com/in/munavarh) | munavar.com | [github/munavarhs](https://github.com/munavarhs)

EDUCATION

Virginia Tech

Masters in Computer Science; GPA 3.83

Falls Church, Virginia

Jan 2024 – Dec 2025

Jawaharlal Nehru Technological University

Bachelor of Computer Science; GPA 8.72

Hyderabad, India

July 2017 – May 2021

TECHNICAL SKILLS

Programming: Java, Python, C/C++, SQL, JavaScript, HTML/CSS.

Machine Learning: Machine Learning, Regression, Classification, Data Cleaning, Data preprocessing, Data transformation, Feature Engineering, Data Visualization, XGBoost, Cross Validation, Deep learning, Natural Language Processing, CNN, RNN, Transformers, Sentiment Analysis, Large Language models, Fine tuning

Other: Jupyter, Git, Azure, PowerBI, Microsoft Excel, NumPy, Scikit-Learn, SciPy, Matplotlib, spaCy, Keras, Tensorflow, Probability and Statistics, Written Communication skills, Documentation, AWS, React Native Mobile Apps, Data Structures, System Design, Agile Development.

PROJECTS

Patient Readmission Analysis [↗](#)

- Developed predictive models for hospital readmission using machine learning techniques, achieving 93.3 percent accuracy with an ensemble model combining Random Forest and XGBoost.
- Engineered features and preprocessed data from 91,713 records, expanding attributes from 186 to 239 through one-hot encoding, scaling, and new feature creation.
- Conducted SHAP analysis to identify key predictors influencing readmission, improving model interpretability and enabling actionable healthcare insights.

Amazon Reviews - Sentiment Analysis [↗](#)

- Collaborated Natural language processing and Deep learning techniques to perform Sentiment analysis on imbalanced Amazon reviews.
- Conducted text preprocessing using NLTK and created 100 dimension embeddings using Gensim's CBOW, Skipgram and Fasttext.
- Employed XGBoost model, CNN and RNN using embeddings as features with hyperparameter tuning to achieve 94 percent ROC AUC score.

Reddit Data Analysis: Topic Modeling, NER, and Predictive Modeling [↗](#)

- Conducted topic modeling on Reddit data using Latent Dirichlet Allocation (LDA), achieving optimized coherence scores to identify key themes, supported by data visualizations like word clouds.
- Implemented Named Entity Recognition (NER) and sentiment analysis to analyze sentiment trends and linguistic patterns surrounding key entities using tools like spaCy and VADER.
- Developed predictive models using SVM and XGBoost to estimate Reddit post scores, incorporating features such as topics, embeddings, and sentiment scores, and evaluated model performance using Mean Squared Error (MSE).

EXPERIENCE

Software Development Engineer

Aug 2021 – Nov 2023

Tata Consulting Services; Client: ICICI Bank

Hyderabad, India

- Developed several new features in **InstaBizz** mobile application which includes **payToContacts** various user stories on **UPI, Variant Migration, Home Loans, Fund Transfers** leading to more than **500k** downloads on app store.
- Developed Restful services in different environments (**UAT, CUG, PROD**) using **Spring** framework and **Java**. Retrieved data from Database using **JDBC** and **JPA**.
- Tested in **Postman** and debugging through logs. Worked with **MySQL** and **Linux** Servers. Developed clean code by testing all explicit scenarios and deployed it to the servers after merging into the main branch using **GitHub**.