Mohammad Hasibur Rahman

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EDUCATION

University of Texas at Arlington | Arlington, TX — December 2026
Bachelor of Science in Computer Science — GPA: 3.40

TECHNICAL SKILLS

Java, Python, C, React, NextJs, HTML, CSS, Open AI, MATLAB, Pandas, NumPy, Scikit-learn, PyTorch, TensorFlow, Machine Learning, Deep Learning, Neural Networks, Unity, Flask, Azure, AWS

EXPERIENCE

QBitLab | Remote — June 2024 – August 2024
Machine Learning Intern | *Machine Learning, Computer Vision, Model Optimization, UX Optimization*

- Built an AI-powered waste classification model that achieved 85% accuracy in identifying waste materials from user-submitted images and recommending appropriate recycling methods.
- Improved user engagement by 45% through a streamlined interface and increased model efficiency by 30%, optimizing classification speed and accuracy.
- Conducted extensive testing and validation using a diverse dataset of waste materials, reducing model error rates by 15% through iterative refinements.

Undergraduate Research Opportunity Program | Arlington, TX — January 2024 – May 2024
Research Assistant | *Android Studio, Java, Machine learning*

- Developed an app using Unity for displaying a 3D interface based on signal data.
- Enhanced user interactivity by 40% through intuitive design and interactive elements.
- Integrated app with Meta Quest 3 for immersive 3D visualization of signals in noisy environments.

University of Texas at Arlington | Arlington, TX — August 2023 – May 2024
Undergraduate Student Assistant | *Yolov5, Roboflow, PyTorch, Python, Deep Learning*

- Created a signal detection model using Yolov5 and trained it with PyTorch, improving accuracy by 35%.
- Annotated 1,000 signal images with Roboflow to prepare data for model training.
- Demonstrated the risk of undetected radar signals by applying Gaussian, Salt & Pepper, and Speckle noise to spectrums.

ACTIVITIES & LEADERSHIP

Students in Computing and Artificial Intelligence | Arlington, TX — October 2023 – Present
Founder & Former-President

- Led 9 workshops on Machine Learning and Neural Networks with over 25 students each, boosting engagement by 60%.
- Co-organized UTA Datathron Spring 2024 including a deep learning project showcase with SCAI officers.

PROJECTS

Income Classification Project | *Pandas, Scikit-Learn, Streamlit, One-Hot Encoding, SMOTE* — August 2024

- Cleaned data by handling missing values and irrelevant columns, applied One-Hot Encoding and Label Encoding for categorical variables, addressed class imbalance using SMOTE, and normalized numerical features using MinMaxScaler.
- Applied Decision Tree (80.87%), Naive Bayes (79.56%), and Logistic Regression (80.06%) to predict income classification, optimizing accuracy with SMOTE and normalization.
- Developed an interactive web app using Streamlit to visualize model predictions and allow users to input data for real-time income classification.

Supply Chain Regression Analysis Project | *MinMaxScaler, ANOVA F-test, Extra Trees Regressor, Chi-Square Test* — July 2024

- Utilized ANOVA F-test and Extra Trees Regressor to identify key features like Price, Availability, Revenue Generated, and Stock Levels, enhancing model efficiency.
- Implemented Linear Regression, Ridge Regression, and Lasso Regression, achieving accuracies of 85.6%, 83.2%, and 84.1% respectively for cost prediction and decision-making.

Sleep Health Analysis Using Logistic Regression | *Logistic Regression, Chi-Square Test, Pearson Correlation Analysis* — May 2024

- Predicted sleep disorders with 80% accuracy using logistic regression, one-hot encoding, and label encoding for preprocessing.
- Applied feature selection techniques (chi-square test, extra trees) and Pearson correlation to identify key features.

Customer Churn Prediction using K-Nearest Neighbors (KNN) | *Data Preprocessing, Cross-Validation, KNN* — April 2024

- Preprocessed customer churn data by converting categorical variables and scaling features.
- Optimized KNN with cross-validation, achieving 90% accuracy and providing insights for customer retention strategies.

CERTIFICATIONS & AWARDS

Arlington Conservation Council Scholarship ($1000) — April 2024
Nokia Outstanding Pre-Professional CS Student ($1000) — April 2024
Open Award (UTA Research Commons) for most viewed project for “Minions Fitness Tracker” — March 2024
MathWorks Challenge (Ranked 2nd) — April 2023

PUBLICATIONS

- RF-Vision: Object Characterization using Radio Frequency Propagation in Wireless Digital Twin, In IEEE Xplore [Accepted]. — Nov 2024
- "A Systematic Literature Review on the Application of Artificial Intelligence and Machine Learning in Personalized Medicine: Methodological Advances and Emerging Trends", In SSRN [Accepted]. — August 2024
- “Speclearn: Spectrum Learning in Shared Band under Extreme Noise Conditions,” In IEEE International Symposium on Dynamic Spectrum Access Networks” [Accepted]. — May 2024