

Tofa Hossain

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Education:

- **Memorial University of Newfoundland (Current Student)**
 - M.Sc in Computer Science
 - **American International University - Bangladesh**
 - B.Sc in Computer Science (2020 - 2024)
 - CGPA - 3.9 out of 4.0
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Academic Projects (Selected):

- **Netflix Dataset Analysis (Data Visualization)**
 - Comprehensive analysis of Netflix's content trends and recommendation patterns.
 - Interactive and static visualizations for data-driven insights.
 - Analyzed main genres and subgenres to identify content distribution patterns.
 - Technologies Used: JavaScript, Python (Pandas, Seaborn, Matplotlib), D3.js, Plotly
- **Stock Trading Simulation (Software Engineering)**
 - Real-time stock data integration with trading and portfolio management.
 - Analytics dashboards with performance visualization and leaderboard tracking.
 - Secure authentication, customizable game creation, and transaction history.
 - Technologies Used: JavaScript, Node.js, EJS (frontend templating), MongoDB (database).
- **Legal Document Query System (Data Mining)**
 - Integrated a RAG pipeline to retrieve and process relevant legal documents for accurate query responses.
 - Implemented Legal-BERT and OpenAI models for legal query responses to evaluate performance.
 - Conducted comparative analysis using BLEU score to evaluate the accuracy and contextual relevance of model outputs.
 - Developed a Streamlit-based user interface for seamless interaction and real-time query processing.
 - Technologies Used: Python, Streamlit, LangChain, OpenAI
- **Cats/dogs Image Classifier (B.Sc Machine Learning)**
 - Data pre-processing and Normalization.
 - Dropouts and Batch Normalization to reduce overfitting.
 - Technologies Used: Pandas, TensorFlow - CNNs

Work Experience:

- **Banglalink, Service Assurance Management Intern (June 2023- Sept 2023)**
 - Service Assurance Management - Daily, Weekly, and Monthly Report Generation.
 - Automated data cleaning process using Python - Pandas, improving document retrieval speed by 25%.
 - Directly addressed over 800 customer concerns nationwide in 3 months.

Research Works:

- **Threat Detection and Intrusion Prevention in Cloud Computing (Unpublished)** - This paper explores how IPS technologies have evolved to meet challenges, focusing on HIPS, NIPS, and AI-driven models.
 - **Impact of Transfer Learning for Adversarial Robustness (Unpublished)** -This paper aims to organize and establish connections in the existing research related to the impact of transfer learning on adversarial robustness.
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Personal & Creative Works(Selected):

- Tic Tac Toe Game (Web Development)
 - Interactive game with player symbol customization and animated winning squares.
 - Dynamic status updates and responsive layout for accessibility.
 - Enhanced gameplay experience with hover effects.
 - Responsive layout for accessibility across devices.
 - Technologies Used: React, CSS, JavaScript, HTML, GIFs for animations, Responsive Design
 - UI/UX Design (Figma):
 - Fruit Soda Company Website UI – Designed a clean and visually appealing website UI for a fruit soda company, focusing on product showcase, user-friendly navigation, and vibrant, brand-aligned visuals.
 - Interactive Pizza Shop Website UI –Developed an interactive website UI for a pizza shop, with a dynamic menu system, order customization features, and smooth user interactions for a seamless browsing experience.
 - Graphic Design (Adobe Photoshop, Illustrator)
 - Project Exhibition Poster for Ahsanullah University – Designed an engaging poster for the university's project exhibition, incorporating the theme and highlighting key projects.
 - Event Poster for IUT – Created a vibrant event poster for an (Islamic University of Technology) event, focusing on the event's key message and audience engagement through dynamic visuals.
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Technical Skills:

- Python, JavaScript, SQL, HTML, CSS
- Pandas, FastAPI, NodeJS, React, MongoDB, Postgresql
- Seaborn, Matplotlib, D3.js, Plotly
- Git, MS Office - Word, Excel, PowerPoint, LaTeX
- Figma, Canva, AutoCad

Soft Skills

- Leadership
 - Teamwork and Effective Communication
 - Attention to details
 - Problem- solving
 - Technical Writing
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Awards and Certifications:

- Higher Secondary School Certificate Board Scholarship (4th December, 2019)
- Leadership Training Certificate from BYLC (Bangladesh Youth Leadership Center)
- Cisco networking academy IT Essentials course (4th July, 2020)
- Sexual Violence, Awareness and Prevention certification

Voluntary Experiences:

- Led and managed many school and collage events
- Participated in Women's Competitive Programming
- Online Competitive Gaming
- Solving Puzzles
- Music, Arts and Crafts