

# YEAMINUR RAHMAN

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## EDUCATION

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**Master of Science**, Computer Science September 2023 - November 2025  
Dalhousie University, Halifax, NS, Canada  
Grade: 4.07 (out of 4.30)  
Research Domain: Human-Computer Interaction, Data Visualization, Software Development

**Bachelor of Science**, Computer Science and Engineering January 2017 - January 2022  
BRAC University, Dhaka, Bangladesh  
CGPA: 3.75 (out of 4.00)  
Research Domain: Machine Learning, Artificial Intelligence, Data Science

## TECHNICAL PROFICIENCIES

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**Programming Languages** - Python, JavaScript, Java SE  
**Web Development** - ReactJS, WebSocket, Node.js, MongoDB, PostgreSQL, Django  
**Data Analysis & Machine Learning** - Scikit-learn, Hugging Face, TensorFlow, vLLM, LangChain, LangGraph, PySpark  
**Tools & Platforms** - Tableau, Power BI, ERP Analytics, Metabase, Figma, L<sup>A</sup>T<sub>E</sub>X  
**Version Control** - Git, GitHub

## EXPERIENCE

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**AI/LLM Engineer (Software Development)** October 2025 – Present  
Datifex, Halifax, NS, Canada

- Developing and managing LLM-based backend pipelines for intelligent model routing (Agents), and orchestration
- Designing human-LLM interaction workflows
- Designing and developing Retrieval-Augmented Generation (RAG) systems
- Integrating LLM workflows with real-time 3D vessel visualization software

**Research Assistant** September 2023 - September 2025  
Graphics and Experiential Media (GEM) Lab - Dalhousie University, Halifax, NS

- Conducted research on maritime data analytics and visualization
- Designed and evaluated large-display visualizations and interaction techniques
- Collaborated on research projects involving Human-Computer Interaction (HCI), AR/VR, data visualization, and data analytics

**Mitacs Accelerate Intern - Data Visualization & Software Development** May 2024 - May 2025  
Glas Ocean Electric, Halifax, NS, Canada

- Developed real-time dashboard software to visualize vessel data and support fuel-efficient navigation
- Worked with onboard sensors and maritime hardware to collect and display live operational data
- Developed and designed eco-driving and route visualization features for vessel dashboards
- Supported research to improve navigation efficiency and user experience

**Management Trainee - Technology** September 2022 - August 2023  
Grameenphone (Telenor), Dhaka, Bangladesh

- Developed features and modules for in-house employee management software
- Analyzed data to support efficient and informed software development processes

- Ensured agile operations across cross-functional teams

### **Intern - Data Analysis and Automation**

April 2022 - September 2022

Nestlé, Dhaka, Bangladesh

- Imported sales and inventory data from ERP systems and integrated it with visualization tools to support real-time business insights.
- Performed data preprocessing and analysis to generate actionable insights for business decision-making.
- Developed Microsoft Power Apps Software and Flows
- Managed Automation Software and PowerBI dashboards

### **Student Tutor**

February 2020 - December 2021

BRAC University, Dhaka, Bangladesh

Courses Taught: Data Structures, Programming Language I

## **PROJECTS & PUBLICATIONS**

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### **Evaluating the Impact of Eco-Driving Feedback and Historical Route Visualization Systems on Fuel Efficiency and Decision-Making in Maritime Operations**

*Tech Stack:* WebSocket, Leaflet.js, MongoDB, D3.js, Flask, ReactJS, Node.js, NMEA Decoder, Tera Term, Tobii Pro Lab.

### **Visual Analytics in Maritime Operations: Enhancing Vessel Analytics via AIS and Radar Integration with Predictive AI and Clustering**

*Tech Stack:* Python Libraries, GeoPandas, Scikit-learn, MongoDB, Leaflet.js, D3.js, Flask, ReactJS, Node.js.

### **Visual Insights into Maritime Anomalies: Techniques and Applications for Ship Trajectory Analysis**

*Tech Stack:* ReactJS, Node.js, MongoDB, Python Libraries, GeoPandas, Leaflet.js.

### **CRAM: A Credit Risk Assessment Model by Analyzing Different Machine Learning Algorithms**

*Published in:* 4th International Conference on Information and Communications Technology (ICOIACT).

*Tech Stack:* Python Libraries, Pandas, Scikit-learn, Django, MySQL.

### **Real-Time Patient Ailment Monitoring Framework Using Enhanced CNN Architectures**

*Published in:* 11th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems (IDAACS).

*Tech Stack:* Python Libraries, TensorFlow, Google Speech API, Django.

### **A Comprehensive Framework for Superstore Business Using Clustering Techniques**

*Published in:* 2021 24th International Conference on Computer and Information Technology (ICCIT).

*Tech Stack:* Python Libraries, Pandas, Scikit-learn.

### **IoT-Based Automated Miner Tracking and Hazard Monitoring System**

*Tech Stack:* Arduino, Django.

## **HONOURS AND AWARDS**

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### **Dalhousie University**

Awarded full funding for the Master's program (September 2023 - September 2025)

### **BRAC University**

- **Special Recognition Award** in Data Science by the Vice-Chancellor of BRAC University
- Graduated with "High Distinction" from BRAC University, Bangladesh
- Included twice on the Vice Chancellor's Honour List in recognition of outstanding academic performance
- Included once on the Dean's Honour List for outstanding academic performance

### **Robi Datathon 2.0**

- **Top Data Engineer** - Datathon 2.0, Organized by Robi Axiata Ltd and powered by Amazon Web Services

- **Second Runner-Up** - Datathon 2.0, Organized by Robi Axiata Ltd and powered by Amazon Web Services

**Description:** Datathon 2.0 is Bangladesh's largest and most prestigious datathon, focused on solving business problems through Big Data and Machine Learning. The competition featured over 400 teams and 2,800 participants from 70+ universities across 11 countries.

## CERTIFICATIONS

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**Database Design and Basic SQL in PostgreSQL**, Coursera, University of Michigan

**Intermediate PostgreSQL**, Coursera, University of Michigan

**Introduction to Big Data**, Coursera, University of California, San Diego

**Foundations of Data Science**, Coursera, Google

**Modernize Infrastructure and Applications with Google Cloud**, Coursera, University of Michigan

**Fundamentals of Visualization with Tableau**, Coursera, University of California, Davis

**Python for Everybody Specialization**, Coursera, University of Michigan

**Retrieving, Processing, and Visualizing Data with Python**, Coursera, University of Michigan

**Python and Django Full Stack Web Developer Bootcamp**, Udemy

**React, NodeJS, Express & MongoDB - The MERN Fullstack Guide**, Udemy

## INTERESTS

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Software Engineering, Machine Learning, Data Analytics & Visualization, Geospatial analytics, Human-Computer Interaction