

# Tamim Ahmed

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## Education

**BSc in Electronics and Telecommunication Engineering.** (CGPA: 3.48/4.00)

2022-2026

Chittagong University of Engineering and Technology

Raozan, Chittagong

**HSC in Science.** (GPA: 5.00/5.00)

2018-2020

Hathazari Government College

Hathazari, Chittagong

## Experience

**Brain Station 23**

18/052025 – 30/052025

Industrial Trainee

Mohakhali, Dhaka

- Developed a machine learning-based credit card fraud detection system using Python, scikit-learn, and Streamlit, handling severe class imbalance through undersampling with Random Forest and Gradient Boosting models.
- Implemented an interactive web app for batch transaction predictions via CSV upload, featuring fraud count display and feature importance visualization
- Developed a machine learning based system to predict Uber ride fares in New York City by integrating historical ride data with external factors like US holidays and weather conditions.
- Developed a machine learning workflow using RandomForestClassifier to predict Uber trip generation probability based on location, time, and weather data, integrating SQLite for data storage.

## Projects

**Fake News Detection using Multimodal Fakeddit Dataset** | Python, Transformers, TorchVision, Scikit-learn, Streamlit.

- Developed a multimodal deep learning model combining BERT for text processing and ResNet50 for image analysis to classify fake news into 6 fine-grained categories, achieved 78% accuracy.
- Deployed an interactive Streamlit web application with real-time prediction and added web-scraping functionality to analyze news directly from URLs.

**Credit Card Fraud Detection** | Python, pandas, numpy, matplotlib, seaborn, scikit-learn, streamlit, joblib.

- Developed a machine learning system to detect fraudulent credit card transactions on a highly imbalanced dataset (0.17% fraud), achieving AUC 0.90–0.95 using Random Forest and Gradient Boosting models with undersampling.
- Built and deployed an interactive Streamlit web app for batch prediction via CSV upload, featuring fraud count summary and feature importance visualization to enhance usability and interpretability.

**TypeSpeed** | JavaScript (ES6+), Chart.js, PeerJS, HTML5, CSS3, LocalStorage

- Developed a real-time typing application featuring P2P multiplayer racing via PeerJS and unique word generation logic to enhance user proficiency.
- Integrated dynamic data visualization using Chart.js to track WPM stability and implemented a persistent daily streak system using LocalStorage.

**FormatSwitcher** | JavaScript (ES6+), Chrome API (Manifest V3), HTML5 Canvas, File System Access API

- A Manifest V3 extension utilizing Offscreen Documents and Canvas API to perform client-side image re-encoding, proportional resizing, and quality compression.
- Optimized image processing workflows with custom aspect-ratio algorithms and lossy compression sliders, ensuring high-quality output with reduced file sizes.

## Achievements

**Scholarship:** Technical Scholarship upto 6th semester.

**Codeforces:** Maximum rating 995, solved 554 problems.

**Codechef:** Maximum rating 1165, solved 85 problems.

## Technical Skills

**Languages:** C, C++, Python, Matlab

**Frameworks/Libraries:** Pandas, Numpy

**WebDev:** HTML, CSS, JS, PHP, MySQL

**IDE & Tools:** VS Code, Jupyter Notebook, MS PowerPoint,  $\LaTeX$