Abir Bokhtiar

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Career Objective

Actively seeking opportunities as a Web Developer, Data Analyst or Machine Learning Engineer. Proficient in Python, Java, and C++, with hands-on experience in data analysis, deep learning, and full-stack web development. Eager to contribute to real-world projects and grow in a dynamic, tech-driven environment.

Education

Bachelor of Science in Computer Science and Engineering Jan 2022 – Jun 2025

- American International University-Bangladesh
- CGPA: 3.95/4.00

Skills Summary

Programming Languages: Python, R, C++, Java, C#, JavaScript, HTML, CSS, PHP, Kotlin

Tools & Technologies: Scikit-Learn, TensorFlow, PyTorch, OpenCV, NodeJS, NextJS, MySQL, Power BI, PostgreSQL

Projects

Elevate (Backend) - *NestJS, TypeORM, PostgreSQL, Together.AI, Hugging face* **GitHub Repo**

- Developed a secure NestJS-based e-commerce platform with multi-authentication support (email/password & face recognition), leveraging JWT and RBAC for access control, reducing authentication time by 40%.
- Created end-to-end order and invoice systems, including CRUD operations, PDF generation, automated email invoicing and real-time notifications via email and in-app messaging.
- Integrated AI-powered chatbot (Mistral) for dynamic product recommendations and descriptions, alongside PostgreSQL full-text search for enhanced user experience.

EVsolaris - *PHP, HTML, CSS, JavaScript, MySQL* **GitHub Repo**

- Built a platform for a seamless EV user experience with easy access to solar-powered charging stations, promoting sustainable transportation.
- Developed a system to meet EV charging demand while reducing reliance on traditional energy sources up to 70%.
- Optimized login authorization with dynamic verification, cutting login time by 20%.

BookNest - *C#, .NET Framework, WinForms, SQL Server* **GitHub Repo**

- Developed a C# WinForms desktop app (.NET, SQL Server) for an online bookshop with distinct Admin, Customer, Employee and Supplier roles.
- Features include registration/login, book search, books management, order processing, billing and user account updates, inventory management and role-based dashboards.

DYL-Leaf - *PyTorch, Scikit-learn, Seaborn* **GitHub Repo**

- Utilized preprocessing techniques and Knowledge distillation for leaf disease classification.
- Transferred Knowledge from a teacher model, YOLOv11n (2.6M parameters) to a smaller student model.
- Achieved 93.8% validation accuracy with student model that has only 545,005 parameters.
- Trained on a subset of the PlantVillage dataset containing 4,144 images across 13 classes.

Vision-CNN Face Recognition System - *Python, TensorFlow, Haarcascade* **GitHub Repo**

- Developed an accurate face recognition system capable of detecting faces of group members.
- The system could recognize faces with a confidence level of 80%

Socio Sentiment Scope - *Python, TensorFlow, Seaborn* **GitHub Repo**

- Conducted exploratory data analysis (EDA) and created visualizations (e.g., bar plots, histograms) to analyze social media usage patterns for predicting emotional well-being.
- Preprocessed data (scaling, encoding, PCA) and implemented Ensemble model (e.g., Decision Trees, Random Forest, Gradient Boosting) to predict dominant emotions with high accuracy.
- Generated classification report and used advance visualizations to explore relationships between demographics, platform usage, and emotional states.

Finsight - *Kotlin, Firebase* **GitHub Repo**

- Built an Android app using Kotlin and Firebase to track and manage personal income and expenses.
- Implemented analytics, reporting, and Excel export features to improve financial visibility and offline access.
- Reduced manual tracking time by 90% through real-time data sync and intuitive UI.

Netflix Stock Prediction - *Power BI, Excel, Google Sheets* **GitHub Repo**

- Developed an interactive Power BI dashboard to analyze Netflix's 2020 stock performance, visualizing key dates, price trends, and trading volumes.
- Identified market volatility and recovery patterns, revealing the impact of COVID-19 on stock performance and investor behavior.
- Provided actionable insights to support investment decisions by highlighting key trends, high-volume periods, and business resilience.

Task Tracker - *Google Sheets, Google App script, Excel* **GitHub Repo**

- Created a task management sheet with automated progress bars, filters, priority tags and reminders.
- Shared across remote teams for collaborative tracking and daily updates.

Research and Publications

Precise Potato Leaf Disease Detection with YOLO Models: A Comparative Analysis *To be presented at The 5th International Conference on Computer, Information Technology and Intelligent Computing (CITIC 2025)*

DYL-Leaf: A Lightweight Distilled YOLOv11n Model for Efficient Plant Leaf Disease classification in Resource-Constrained Environments *To be presented at IEEE 9th International Conference on Software Engineering & Computer Systems (ICSECS 2025)*

Honors and Awards

Dean's List Honors - *Spring 22-23, Fall 22-23*

Certifications

Machine Learning Specialization *(DeepLearning.AI, Stanford)*

Machine Learning A-Z: AI, Python & R + ChatGPT Prize *(Ligency, SuperDataScience Team)*

Google Data Analytics Professional Certificate *(Google)*

References

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