

Kaushik Datta

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Personal Profile

Passionate and results-driven Computer Science graduate from BRAC University with a strong foundation in data science, machine learning, and software development. Eager to pursue a Master's degree to deepen my expertise in AI-driven predictive modeling and large-scale data analysis, leveraging hands-on experience in developing innovative projects.

Education

BRAC University, B.Sc. in Computer Science

May 2020 – May 2025

- GPA: 2.85/4.0
- **Coursework Highlights:** Applied Data Science for Practitioners, Pattern Recognition, Applied Statistics, Discrete Mathematics, Data Structures & Algorithms, Database Systems, Machine Learning, Simulation & Modeling, HPC, Computer Architecture(RISK-V).

Undergrad Thesis

PSSRcomp: A detailed analysis of secondary protein structure prediction

github.com/thesis

- This thesis enables faster drug discovery, personalized medicine (e.g., cancer therapies), and engineered enzymes for biofuels/agriculture. By achieving SOTA accuracy with GNNs, it offers a cheaper, scalable alternative to lab methods, helping researchers and startups innovate in biotech, medicine, and sustainability. Small tech, big change.
- **Key Features:** Multi-Model Comparison, Position-Specific Scoring Matrices (PSSM), PISCES (filtered datasets), Protein Data Bank (PDB), Graph Encoding, Sliding Window + One-Hot Encoding.
- **Tools Used:** TensorFlow/Keras, PyTorch Geometric, Seaborn, Pandas, NumPy, Matplotlib.

Key Projects

Stock Market Price Simulator

github.com/Stocksim

- Developed a predictive model using Long Short-Term Memory (LSTM) neural networks to analyze and forecast stock market trends for MAANG companies (Microsoft, Apple, Amazon, Netflix, Google). The simulator leverages historical stock data (opening/closing prices, volumes, etc.) to train the model, enabling users to explore market dynamics and test trading strategies in a risk-free environment.
- **Key Features:** Multi-Company Analysis, Time-Series Forecasting
- **Tools Used:** LSTM networks (Keras/TensorFlow), MinMaxScaler, Pandas, NumPy, Matplotlib.

Agricultural Analysis and Prediction Using Satellite Imagery

github.com/AriealImagery

- Developed a deep learning model to classify 10 types of cropland from satellite imagery (2017–2020) using Convolutional Neural Networks (CNNs), achieving high accuracy in crop-type identification for precision agriculture.
- **Key Features:** Deep Learning, 3-layer CNN, LIME visualization, Performance analysis for complex classes.
- **Tools Used:** tensorflow/Keras (CNNs), LIME, Google Earth Engine, Scikit-learn (metrics), Matplotlib/Seaborn.

Movie Ticketing System Using payment gateway

github.com/movie-ticket-hub

- This is the client side of the website for a movie ticket buying and selling platform. Notable features of Medi Camp - Dynamic movie data fetching from the TMDB API, Easy payment option for tickets with Stripe, Admin and user roles
- Tools Used: Typescript, React, Tailwind, Authentication(Firebase), Payment Gateway (Stripe)

Extra Culicular Activities

Secretary of Finance - BRAC University Cultural Club

Aug 2023 - Jan 2025

- **Financial Oversight:** Managed budgets, expenses, and financial reporting for student organizations. **Vendor & Contract Negotiation:** Secured cost-effective deals with vendors, ensuring optimal resource allocation. **Risk Management:** Identified financial risks and implemented mitigation strategies. **Decision-Making:** Made data-driven financial decisions to support club operations.
- Relevant Skills: Analytical Skills, Financial Planning, Budgeting, Negotiation, Strategic Decision-Making

Executive of HR - BRAC University Computer Club

Oct 2020 - Mar 2022

- **Team Coordination:** Facilitated recruitment, onboarding, and engagement of club members. **Verbal & Written Communication:** Drafted policies, resolved conflicts, and maintained clear internal communication. **Strategic Thinking:** Developed HR initiatives to improve member retention and organizational efficiency.
- Relevant Skills: Interpersonal Communication, Leadership, Conflict Resolution, Organizational Strategy.

Awards & Certifications

Runner-Up, Intra-University Problem-Solving Competition (2022), BRAC University

Honorable Mention, Intro to Bio-informatics Workshop (2023), BRAC University

Technical Skill Set

Programming Languages: Python (Advanced), SQL (Advanced), HTML/CSS (Advanced), C/C++ (Intermediate), R (Basic)

AI/ML & Data Science: Predictive Modeling, Time-Series Forecasting, Computer Vision, Bioinformatics, Data Visualization

Software Development: Frontend (React, Tailwind CSS, HTML/CSS), Backend(Firebase, REST APIs). DevOps (Git, GitHub, CI/CD Basics)

Technologies: Advanced data analytics (Excel, Power BI, Python for automation), Microsoft Office (Advanced), Microsoft SQL Server, Interface Builder

Language Proficiency

Bengali: Native

English: IELTS 6.5 , CEFR B2 Level

Mandarin: Elementary / 2a