# Souharda Bhattacharjee

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# Profile

Dedicated Data Science and Machine Learning specialist pursuing a Bachelor's degree in Computer Science. Being skilled in analytical problem-solving, technical expertise, and effective teamwork, I bring strong commitment and leadership experience in driving advancements in technology and data-driven applications.

# Experience

# Computer Vision and Intelligent Systems Research Lab (CVIS - BRACU)

Oct 2023 - 2025

Researcher

- Developing Quality Control in the Textile Industry using advanced Machine Vision techniques.
- Working and developing Computer Vision techniques on various types of Machine Learning methods.

#### Extra Curricular Activities

#### BRAC University Computer Club (BUCC)

2023 - 2024

Director, Communication & Marketing

Led the Marketing Team, managing sponsorships, corporate affiliations, and budgeting for events.

#### Hult Prize at BRAC University

2023 - 2024

Head of Judge Management

- Coordinated competitions and events by designing judging processes and overseeing teams.
- Ensured smooth, efficient experiences for participants and judges.

#### Education

#### Bachelor of Science: Computer Science

2021 - 2025

BRAC University, Dhaka

Key Coursework: Data Structures & Algorithms, Software Engineering, Database Systems, Artificial Intelligence, Neural Networks, Data Science, Machine Vision, Business & Human Communication

### **Projects**

#### Fabric Defect Detection System

Thesis Project

- Created a dataset of 7,000+ textile images for defect detection.
- Manually annotated class-specific defects ensuring precision and consistency.
- Developed a YOLOv8-inspired CNN for real-time fabric defect detection.

#### Other Projects

Personal Projects

- University Student Management System: Core course-to-finance management system for smooth student lifecycle.
- Leather Quality Assessment: Applied ML and vision models for surface defect classification.
- Vehicle-Fuel-Consumption: Analyzed performance, fuel efficiency, and emissions using regression models.
- Mice Protein Expression: ML analysis of biomarkers (UCI dataset) using PCA and classification.

#### Technical Skills

Languages & Scripting: Python, JavaScript, SQL, C/C++

Frontend Development: React, Tailwind CSS, Next.js, HTML, CSS

Machine Learning Frameworks: PyTorch, Scikit-learn, TensorFlow, OpenCV

Backend & APIs: Node.js, Express, Flask, REST, FastAPI

Database & ORM: PostgreSQL, MySQL, MongoDB

Cloud & DevOps: Vercel, Firebase, CI/CD Tools: Git, VS Code, Tableau, Power BI, Excel Other: n8n, Zapier, Email HTML/MJML, Figma

#### **Professional Skills**

Soft Skills: Communication, Team Collaboration, Mentorship, Corporate Deal

Analytical Abilities: Critical Thinking, Adaptability, Creative Problem Solving, Analytical Thinking

# Certificate

#### MLOps Fundamentals - DataCamp

Completed on September 4, 2025 (14 hours). Covered CI/CD pipelines, model deployment, monitoring, and reproducibility best practices in MLOps.