

RIFAT ARMAN CHOWDHURY

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Experience

Obby

USA (Remote)

Technical Engineer & Data Analyst

Nov 2024 – Present

- Built 17+ responsive client landing pages and full websites; implemented the front end with React, Tailwind CSS, shaden/ui, and Redux; created site forms with QuillForms; after backend integration, authored test plans, executed cross-browser/device QA, and fixed issues for production
- Implemented Meta Pixel and GA4; launched and monitored Meta/Google Ads campaigns; analyzed performance and produced weekly reports; automated form-submission alerts to Slack, Google Voice, and email; set up automations for SEO/branding content posting and client onboarding

Mentors Education

Dhaka, Bangladesh

Instructor of ESL

Nov 2023 – Present

- Delivered spoken English and grammar classes to 450+ students; developed 11 lesson plans and assessments; provided individualized feedback to improve student outcomes
- Introduced digital attendance and progress tracking; coordinated curriculum with faculty; facilitated mock tests and speaking practice sessions

Projects

FinGuard | *React, Tailwind CSS, Recharts, Flask, PostgreSQL, JWT, bcrypt*

Code

A smart budgeting app that tracks income, expenses, and savings; designed for personal finance learners and students to practice financial planning.

- Built a modular React frontend with Tailwind CSS and Recharts for interactive dashboards that display spending patterns, income streams, and savings progress
- Flask backend with PostgreSQL database and SQLAlchemy ORM; JWT authentication and bcrypt-secured passwords for safe user sessions
- Integrated budget suggestion logic powered by planned ML models (Naive Bayes/XGBoost) to recommend saving strategies such as adjusting category budgets
- Configurable local setup with environment variables and documented DB initialization steps for reproducible testing

BlinkGPT | *Python, Django, OpenCV, HTML, CSS, JavaScript, SQLite*

Code

A chatbot that replaces mouse input with eye movement and on-screen keyboard for hands-free accessibility; built with Python/OpenCV and Django.

- Eye-tracking system using OpenCV detects gaze direction and blinks to emulate cursor actions such as clicks and navigation
- Integrated on-screen keyboard within the chatbot UI for full text input controlled by eye gestures
- Django backend serves the chatbot and routes; SQLite DB bundled for zero-configuration local runs
- Calibrated thresholds allow adaptable accuracy across webcams and lighting conditions, making it usable for accessibility demos

Technical Skills

Languages & Scripting: Python; JavaScript; SQL

Frontend: React; Tailwind; Next.js; HTML; CSS

Backend: Node.js; Express; Flask; REST

Databases/ORM: PostgreSQL; MySQL; MongoDB;

Cloud/DevOps: Vercel; Firebase; CI/CD

Testing/QA: Test planning & case design; Requirements traceability & risk-based testing; API testing (Postman); Web/UI automation (Selenium/WebDriver); Python scripting & PyTest; SQL/data validation; CI/CD test pipelines (GitHub Actions); Defect management & triage (Jira/TestRail)

Tools: Git; VS Code; GA4; Looker Studio; Tableau; Power BI; Excel
Other: JWT; OAuth2; Email HTML/MJML; Figma

Education

BRAC University
Bachelor of Science in Computer Science

Dhaka, Bangladesh
Oct 2021 – Sep 2025

Thesis / Research Project

An Advanced Machine Vision Technique for Quality Control of Fabric in the Textile Industry
BRAC University

Jun 2024 – Jun 2025

- Advanced machine vision pipeline for textile quality control using a novel 7k-image factory dataset; combines YOLOv8 for defect localization and EfficientNet-B0 for classification/verification
- Achieved 91% overall accuracy on a held-out validation set; demonstrates reliable defect detection and category separation suitable for downstream QA checks
- Designed for production readiness with modular stages and dataset-centric retraining; adaptable to new fabric types and emerging defect patterns

Leadership & Co-Curricular Activities

Researcher, Computer Vision and Intelligence System (CVIS) Lab,
BRAC University

Sep 2023 – May 2025

- Contributed to applied computer vision research; assisted with dataset preparation, experiment design, and literature reviews aligned to lab objectives
- Implemented and evaluated baseline models; documented findings and shared results in internal reviews to guide next iteration

Senior Executive, Football Club of BRAC University

Oct 2022 – March 2024

- Coordinated club operations and events with the executive committee; supported training schedules, logistics, and university liaison
- Managed communications and volunteer teams; improved event readiness and participation through clear task tracking and follow-ups

References

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