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, shadcn/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: n8n; Zapier; GoHighLevel; JWT; OAuth2; Email HTML/MJML; Figma

Education

BRAC University   Dhaka, Bangladesh
Bachelor of Science in Computer Science   Oct 2021 – Sep 2025

Thesis / Research Project

An Advanced Machine Vision Technique for Quality Control of Fabric in   Jun 2024 – Jun 2025
the Textile Industry
BRAC University

- 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,   Sep 2023 – May 2025
BRAC University

- 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 20214

- 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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