Rocky Dewan

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🌐 rocky-dewan.github.io/-Rockyfolio

Profile Summary

- **Data Processing & Visualization:** Skilled in Python (Pandas, NumPy, Matplotlib, Seaborn) for efficient data extraction, cleaning, and analysis. Focused on improving model accuracy and deployment efficiency.
- **LLM Training & Deployment:** Hands-on experience fine-tuning and deploying large language models.
- **AI Projects:** Built 7+ full-stack AI systems including Rockbot-AI Assistant, chatbots, dashboards, and reporting platforms.
- **Cross-Platform Development:** Proficient in Python, JavaScript, C++ for IoT, embedded, and web.

Technical Skills

- **Languages:** Python, JavaScript, TypeScript C++, C, Java, HTML, CSS
- **Databases:** MongoDB, MySQL, Firebase
- **ML/AI:** TensorFlow, PyTorch, Scikit-learn, Keras, LLMs, CNNs, NLP
- **Visualization:** Matplotlib, Seaborn, Plotly
- **Frameworks:** React, Flask, FastAPI, Streamlit, Django
- **DevOps:** Git, Docker, Postman, AWS, CI/CD, Linux

Key Projects

Rockbot – AI Assistant   October-2025

Rockbot-AI is an advanced AI assistant built for autonomous task execution and complex interactions. Its core strength lies in a Multi-Agent Architecture with specialized agents to handle Q&A, content generation, and task planning. The user experience is enhanced through a modern React-based UI enabling conversation saving, sharing, and document export.
Tools: JavaScript, Python, React, Flask, Shell Scripting, LLMs, Multi-Agent Frameworks, OpenAI Vision API, OpenRouter, SQLAlchemy, Tailwind CSS, REST API, and others
GitHub Repo: github.com/Rocky-Dewan/Rockbot-AI-Assistant

Passwordless-Auth   November-2025

Designed a passwordless authentication system using short-lived magic links (30s expiry) and 8-digit OTPs. Implemented CSRF protection, audit logging, XSS prevention, and authentication-bypass mitigation within a Dockerized environment.
Tools: TypeScript, TypeORM, Docker, Email OTP, CSRF Protection, Security Auditing
GitHub Repo: github.com/Rocky-Dewan/passwordless-auth

Voxcrypt   December-2025

Built a secure web application that encrypts audio files into encrypted images using a 12-character composite passphrase. Utilized PBKDF2 key derivation and AES-256-GCM encryption with significant file size reduction and secure data recovery.
Tools: TypeScript, AES-256-GCM, PBKDF2, Cryptography, Secure File Encoding
GitHub Repo: github.com/Rocky-Dewan/Voxcrypt

CityPulse   June-2025

CityPulse is a full-stack urban issue reporting platform that empowers citizens to report real-world city problems like potholes, broken streetlights, and garbage dumps directly from their location.
Tools: JavaScript, React.js, MongoDB, Tailwind CSS, OpenStreetMap API, Axios, REST API, Postman, OpenStreetMap API, Axios, Tailwind CSS, Render
GitHub Repo: github.com/Rocky-Dewan/City-Pulse

- **More Projects:** github.com/Rocky-Dewan
- **Portfolio:** rocky-dewan.github.io/-Rockyfolio

Experience

Academic Team Member — Bangladesh Mathematical Olympiad   Dec-Present
AI Software Engineer (Remote) — Fanni AI, Jordan   Mar–May 2025
Developed AI-driven features for e-commerce, optimizing performance using scalable ML pipelines.

Education

B.Sc. in Computer Science and Engineering   2022–2026
Bangladesh University of Business and Technology (BUBT), Dhaka

Achievements

- Champion — Intelligent attendance system in Hardware and IoT Mode, Tech Brainstorm   2025
- First Runner-up — Artificial Intelligent Mode , Tech Brainstorm   2024