

PROMA RIDDHI DAS

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Portfolio: promariddhi.vercel.app

SUMMARY

Backend and systems software developer. Comfortable building full-stack web applications, with primary focus on backend and system design. Adept at solving complex problems, collaborating in teams, and delivering client-focused digital solutions.

EDUCATION

SRM Institute of Science and Technology Masters in Computer Applications (MCA) Current GPA: 9.65/10.0	Chennai 2024-current
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Lady Brabourne College, Calcutta University Bachelor of Science (B.Sc. Honours) in Physics Final GPA: 7.4/10.0	Kolkata 2021-2024
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Delhi Public School, Kanpur CBSE Senior Secondary Certificate Score: 96.2%	Kanpur 2019-2021
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EXPERIENCE AND PROJECTS

Lohia Aerospace – Internship (Python, PyQt5, Pandas, Matplotlib, NumPy)

- Developed a full-featured PyQt5 GUI, streamlining lab data analysis and visualization workflows to replace manual Excel-based processes, reducing reporting time from 3 - 4 hours to under 10 minutes.
- Automated end-to-end data integration and validation using Pandas and NumPy, enabling seamless merging of multiple Excel sheets, eliminating human error and reducing manual effort.
- Engineered a dynamic reporting and modeling module in Matplotlib that supports parameter-based graph customization, allowing users to generate fully tailored reports and analytical plots in one click.

Transport Layer Database Access Firewall (Golang, Docker) [Source](#)

- Built a protocol agnostic Layer-4 TCP proxy with graceful shutdown and enforced security policies global and per IP connection limits, token bucket based connection rate limiting, and configurable timeouts.
- Added structured logging and in-memory metrics (connections, bytes in/out) to support future Prometheus integration and operational observability.
- Containerized the service using a Docker build. Tested core policies and control logic using Golang's native testing library.

Video Conferencing App (React, WebRTC, TailwindCSS, Socket.IO, FastAPI, PostgreSQL) [Source](#)

- Built an end-to-end real-time video conferencing system supporting peer-to-peer media streaming and dynamic participant management.
- Implemented WebRTC peer connections with offer/answer exchange, ICE candidate handling, and Socket.IO-based signaling for peer lifecycle management.
- Developed a FastAPI backend with JWT authentication and PostgreSQL for user management and meeting coordination.

ACHIEVEMENTS

- Ranked **4th in All-India Web Scraping Competition** (built high-efficiency data extractor).
- 150+ LeetCode problems solved** with regular practice in problem solving.
- Selected as **IQAC Council Member** (Physics Dept.), led initiatives impacting 70+ students.

TECHNICAL SKILLS

- Languages:** Python, Golang, JS, SQL
- Backend:** FastAPI, Django
- Frontend:** React, Tailwind CSS
- Systems/Tools:** Docker, AWS (EC2, CI/CD), Git, Pandas, NumPy

CERTIFICATIONS

- NPTEL- Design and Engineering of Computer Systems, Database Management System, Programming Data Structures and Algorithms in Python
- AWS Cloud Foundations (AWS Academy)