Indroneel Mukherjee

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EDUCATION

Malaviya National Institute of Technology Jaipur

Bachelor of Technology

Kenbridge School

Intermediate Education in Science

Jaipur, Rajasthan *Nov. 2021 – May. 2025* Kota, Rajasthan

July. 2018 – March. 2020

EXPERIENCE

Metis Al June. 24 – Sept. 24

Full-Stack Developer Intern

- Developed and implemented the frontend architecture of a chat application, ensuring seamless integration with backend APIs and LLM-based chat interface.
- Collaborated with backend engineers to optimize API interactions for performance by reducing response by 3 sec in production.
- Managed deployment pipelines on Github Actions and using AWS S3 for static hosting, improving load times and availability.
- Tech Stack: React.js, JavaScript, AWS S3, Github Actions

PROJECTS

FinPal {link} June. 2025 – Aug. 2025

- Engineered a full-stack personal AI assisted finance management system using Go (Gin) for RESTful API development and React for a dynamic, responsive frontend UI.
- Utilized PostgreSQL with SQLC for strongly-typed queries, implemented database migrations, and enforced ACID transaction handling for secure financial operations.
- Integrated Redis for low latency caching and optimized location-based and GET queries by 17%, enabling context-aware budgeting via OpenRouter powered LLM insights.
- Set up CI/CD pipelines with GitHub Actions to automate build and test processes, ensuring code quality and streamlined delivery.
- Integrated SMTP based OTP email verification for user authentication, enhancing security during onboarding and sensitive transactions.
- Performed comprehensive unit testing on backend services covering 57% of the backend codebase.
- Enabled group/personal money transfers, dynamic expense tracking, and created 3D animation using Three.js.
- Demonstrated proficiency in JavaScript, Go, React, PostgresSQL, SMTP server, Redis, Prompt Engineering, Three.js

CrawlCore {link} Feb. 2025 – Mar. 2025

- Built a multi-tasking application to scrape multiple webpages and provide knowledge graph of the required jobs.
- For scraping multiple webpages Browserless is used to maintain parallelism.
- Knowledge graph of a particular job and company is built by scraping data from LinkedIn and Reddit using Puppeteer library and Brightdata api and with assistance of OpenAI large language model.
- Knowledge graph also outputs a downloadable JSON file of the knowledge graph.
- Demonstrated proficiency in JavaScript, Node.js, Next, Express.js and Tailwind CSS

DBVision {link} Aug. 2025 – Aug. 2025

- Designed and shipped an Al-assisted dbdiagram mirror that converts a simple prompt to Postgres DDL and Entity Relationship Diagram.
- Implemented Next.js frontend with Node.js backend and used Clerk for securing the routes.
- Used Postgres docker image for logical and syntax checks. Used Redis to remember past chats so the assistant stays in context and gets smarter with each message.
- Built an in-browser SQL IDE with CodeMirror enabling reviews and updates. Rendered interactive ERDs with ReactFlow.
- Deployed moonshot:Kimi-k2 llm to generate accurate, context-specific sql code.

SmallTalks {link} May. 2024 – July. 2024

- Engineered a full-stack real-time communication platform supporting direct messaging, group chat, and peer-to-peer video calls using WebRTC and Socket.IO.
- Implemented end-to-end authentication and role-based authorization with JWT and middleware to secure user sessions and API endpoints.
- Designed scalable MongoDB schemas for chat persistence, user presence, and media signaling with optimized query performance.

- Developed a React frontend with dynamic state management and WebSocket listeners for low-latency message and call updates.
- Built and deployed a Node.js backend orchestrating signaling servers, REST APIs, and real-time event handling for high-concurrency communication.

PDF-RAG {<u>link</u>}
Aug. 2025 – Aug. 2025

- Developed a PDF-based RAG (Retrieval-Augmented Generation) application enabling context-aware question answering from uploaded documents.
- Implemented Next.js frontend with Node.js backend and integrated BullMQ for asynchronous job processing.
- Chunked the docs using semantic chunking method.
- Used Ollama embeddings with Qdrant vector database for efficient semantic search and retrieval.
- Deployed LLaMA3-based LLM to generate accurate, context-specific answers from PDF content.

TECHNICAL SKILLS

Languages: C++/C, Python, JavaScript, HTML, CSS, Typescript, Go

Frameworks: React, Next.js

Databases/Backend: SQL, MongoDB, PostgresSQL, NodeJs, ExpressJs, Gin, GraphQL

Fundamentals: Data structures and algorithm, Operating system, Object Oriented Programming, DBMS

ACHIEVEMENTS

- Achieved highest position of **Specialist** and solved more than 350 Problems on **Codeforces**. (codeforces)
- Achieved highest rating of 1730+ on Leetcode. Ranks among top 2 percent users in problem solving.
- Successfully secured state-wise rank 10 among 20 thousand candidates on CGPET-2021.
- Among the Top 1.8 percentile Rankers in JEE Mains among 1 million candidates.