

SUDESHNA PATHAK

Salt Lake, Sector-II, Kolkata, West Bengal, India

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• github.com/SudeshnaPathak • leetcode.com/u/pathaksudeshna

Education

Institute of Engineering & Management

Bachelor of Technology in Computer Science & Engineering, CGPA: 9.80

Sep. 2022 – May 2026

Kolkata, West Bengal

DAV Public School

CBSE, Percentage: 92.2%

July 2022

Carmel School

ICSE, Percentage: 97.33%

July 2020

Dhanbad, Jharkhand

Experience

Hyland Software

June 2025 – August 2025

Kolkata, West Bengal

Research & Development Intern

- Spearheaded the migration of JSON parsing from Newtonsoft.Json to System.Text.Json in E2E tests.
- Improved system observability by introducing dynamic connector versioning in User-Agent API headers and integrating custom DataDog metrics, enabling proactive LLM performance monitoring and analysis.
- Streamlined CI/CD pipelines by fixing PR title validation, restricting non-application deployments, mocking services to reduce noisy log errors, resolving SonarCloud issues, and modularizing validation logic using FluentValidation.

Coderlook Solutions Pvt Ltd

Sept 2024 – March 2025

Software Developer Intern

Kolkata, West Bengal

- Implemented JWT Authentication, Role Based & Permission Based Access Control, Client-Server Authentication, OAuth in Identity and Access Management microservice.
- Developed Point of Sale microservice with automated invoice emailing to reduce manual effort.
- Enabled real-time ticket tracking by integrating Redis polling with Celery task queues and Redbeat Scheduler.

Projects

QueryBridge: Intelligent Query Processing | Python, FastAPI, LangChain, OpenAI API, MySQL February 2025

- Built FastAPI services leveraging RAG pipelines to generate accurate SQL queries and contextual responses from user input, chat history, table metadata, and vector database context.
- Integrated AgenticAI with Google SerpAPI for real-time information retrieval.

Project Risk Management | Python, FastAPI, CrewAI, AWS S3, Boto3, OpenAI API, QdrantVectorStore March 2025

- Built a multi-agent system with GPT-4o-mini for project risk analysis, cross-domain risk scoring and risk category classification, mitigation strategy generation.
- Used vector search (FAISS), for risk report generation and AWS S3 for data storage. Real-time email alerts were triggered via smtplib in a FastAPI backend.

Skills

Languages: Java, Python, C++, C#, SQL, HTML, CSS

Backend Frameworks: Django, Django REST, Flask, FastAPI, ASP.NET

AI/ML & Data Libraries: Tensorflow, Keras, LangChain, LangGraph, CrewAI

Testing Libraries & Tools: Selenium, pytest, NUnit, Postman

Databases: MySQL, SQLite, Postgres

Developer Tools: Git, Github, SonarQube, Docker, Amazon AWS

Soft Skills: Teamwork, Effective Communication, Problem Solving, Versatile, Enthusiastic

Relevant Coursework: Data Structures and Algorithms, Cloud Computing, Database Management System, Object Oriented Programming, Machine Learning, Operating Systems, Computer Networks

Certifications

- Introduction to Algorithms & Analysis
- Database Management System

- Design & Analysis of Algorithms
- Python for Data Science

Achievements

- Secured silver medal in the **Introduction to Algorithms and Analysis** program by **IIT Kharagpur**.
- Solved **600+** **DSA** problems across platforms like **LeetCode** and **GeeksforGeeks**.
- Published 2 research papers on Image Processing and Machine Learning in **IC3Com** and **CIS2024** Conferences.