

Dinesh Bhattacharya

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 LinkedIn

 GitHub

 Portfolio

Experience

Vision Binary

Founder & Software Engineer

Aug 2025 – Aug 2026

Kolkata, India

- Built and delivered full-stack software solutions for business clients, taking projects from **requirements and architecture through development, deployment, and iteration**.
- Designed and integrated **AI agents, LLM-powered workflows, and voice-based AI calling systems** to automate practical business processes and workflows.
- Developed backend services, REST APIs, third-party integrations, and automation workflows while owning the technical lifecycle from implementation through deployment and maintenance.
- Worked directly with **3 clients**, translating business requirements into technical solutions and managing project scoping, communication, and delivery alongside engineering.

Adyakshar Labs

Software Engineer (Part-time)

Aug 2025 – Jul 2026

Remote

- Designed, developed, and deployed full-stack applications and backend services using **Node.js, TypeScript, Python, Express.js, Angular, PostgreSQL, MongoDB, Redis, Docker, and Linux**.
- Integrated **Large Language Models (LLMs), AI Agents, OpenAI APIs, Retrieval-Augmented Generation (RAG)**, function calling, prompt engineering, and vector databases into software applications and automation workflows.
- Developed **REST APIs**, JWT/OAuth2 authentication, asynchronous job processing, Redis-based caching, CI/CD workflows, and cloud deployments for application services.
- Contributed across the software development lifecycle, including requirements, implementation, testing, debugging, deployment, and maintenance of production applications.

Education

Indian Institute of Engineering Science and Technology (IIST), Shibpur

Bachelor of Technology in Computer Science and Technology

Dec 2021 – May 2025

Howrah, West Bengal

Projects

KanbanFlow – Jira/Trello Inspired Task Management Platform

- Built a Kanban task management application using **Angular 22, TypeScript, RxJS, Angular CDK, and Reactive Forms**, supporting task creation, workflow management, filtering, and drag-and-drop interactions.
- Implemented component-based architecture with **Angular Signals**, computed state, reusable components, client-side persistence, and unit testing with Vitest.

PriceIQ – E-Commerce Price Monitoring System

- Built an interactive price monitoring and analytics dashboard using **React, TypeScript, Vite, and Recharts** for analyzing historical pricing data.
- Implemented **Polynomial Regression, OLS Regression, Moving Averages, Z-score anomaly detection, and 95% prediction intervals** without external machine-learning libraries.

Detection of Phishing URLs Using Nature-Inspired Algorithms

- Developed a phishing URL detection system using **Genetic Algorithms (GA) and Particle Swarm Optimization (PSO)**, achieving **96.8% detection accuracy**.
- Built a lightweight detection pipeline using lexical, structural, and domain-based features, designed to process **over 10,000 URLs per minute**, and evaluated it on public phishing datasets.

Technical Skills

Languages: TypeScript, JavaScript, Python, SQL, C/C++, HTML/CSS

Frameworks & Libraries: React, Angular, Node.js, Express.js, Flask, RxJS, Recharts, Scikit-learn

AI & Machine Learning: LLMs, AI Agents, OpenAI API, RAG, Function Calling, Prompt Engineering, Vector Databases, OLS Regression, Polynomial Regression

Databases: PostgreSQL, MongoDB, MySQL, Redis

Developer Tools: Git, Docker, Linux, Vite, Angular CLI, VS Code, Postman

Engineering: REST APIs, Microservices, CI/CD, JWT/OAuth2, System Design, Data Structures & Algorithms