Dhritabrata Mitra
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SKILLS

Frontend: Next.js, React.js, TypeScript, JavaScript (ES6+), Redux, Zustand, HTML5, CSS3, Tailwind CSS, Material UI, Radix UI, shadcn/ui, Lucide React, React Hook Form, Zod, TanStack React Query, Embla Carousel, Sonner, Responsive Design, WebSockets, GraphQL (Apollo Client)
Backend: Node.js, Express, FastAPI, REST/RESTful APIs, Python, tRPC
Databases: PostgreSQL, NeonDB, Drizzle ORM, MySQL, MongoDB
Cloud/DevOps: AWS (EC2, S3, CodeDeploy, CloudWatch), Docker, Kubernetes, Jenkins, CI/CD, dotenv
AI/Realtime: OpenAI APIs, Stream Video/Chat SDKs
Testing & Quality: Jest, React Testing Library, Cypress, Playwright, Test-Driven Development
Tools: Git, Webpack, Babel, Figma, Postman, Confluence, Bitbucket
Security & Auth: JWT, Better Auth, OAuth2 (GCP)

WORK EXPERIENCE

Cognizant Technology Solutions
Software Engineer Sept 2020 – Jun 2023

- Engineered a React/TypeScript e-commerce platform for Estee Lauder using Node.js and PostgreSQL, serving 3M+ users and contributing to $15B+ revenue.
- Integrated Stripe to securely process 1M+ monthly transactions, handling 3M+ API requests.
- Enhanced product search, filtering, and pagination, boosting product discovery and engagement by 20%.
- Built and integrated RESTful and GraphQL APIs with Node.js and PostgreSQL, enabling data flow between a React/TypeScript front end and back end for 3M+ users.
- Reduced frontend load times by 35% and increased checkout conversions by 20% by implementing lazy loading and Webpack code splitting.
- Cut production incidents from 250 to 20 per month by improving release quality through TDD with unit (Jest/RTL) and end-to-end testing (Cypress/Playwright), plus root cause analysis.
- Implemented Jenkins CI/CD pipelines on AWS (EC2, S3, CloudWatch) for Docker/Kubernetes deployments, accelerating release cycles by 50% and reducing infrastructure costs by 25%.
- Mentored 5 interns and conducted peer code reviews, establishing coding standards and supporting 10+ successful production deployments.

Software Engineer Intern Jan 2020 – Apr 2020

- Fixed 10+ critical bugs and shipped 5+ new features, improving site performance and lowering crash rates.
- Collaborated with a 6-member Agile team in sprints, delivering features ahead of schedule.

TECHNICAL PROJECTS

Meet AI | Demo | Live Site | GitHub

- Built a SaaS platform with OpenAI LLM integration for real-time verbal Q&A, providing training and eliminating delays in problem-solving by delivering instant, accurate answers during meetings.
- Developed video conferencing features (calls, screen sharing, recording) using Stream SDKs/WebRTC, enhancing productivity.
- Architected a scalable backend with tRPC, Drizzle ORM, and NeonDB, powering type-safe APIs, faster queries, and advanced search/filtering, improving navigation efficiency.
- Designed a subscription-based payment system using Polar API, enabling users to manage premium plans, track usage, and handle recurring payments.

- Tech Stack: Next.js, React, TypeScript, Tailwind CSS, Radix UI, Lucide React, React Hook Form, Zod, TanStack React Query, Embla Carousel, Sonner, tRPC, Drizzle ORM, NeonDB, dotenv, Better Auth, Stream Video/Chat SDKs, and OpenAI APIs.

ChatAway - Real-time Chat App | Demo | Live Site | GitHub

- Built a real-time chat app (Socket.IO/WebSockets), addressing delays in teamwork by providing immediate messaging and media sharing.
- Implemented secure authentication with OAuth2 (GCP) and JWT, protecting sensitive features and improving trust.
- Integrated Zustand for global state (auth, sockets, themes), creating a consistent user experience across sessions.
- Tech Stack: React.js, Node.js, Express, MongoDB, Cloudinary, Tailwind CSS, Render, and DaisyUI.

Plant Disease Detection | Demo | GitHub

- Built a full-stack AI app (React.js and FastAPI) that identifies plant diseases (Early/Late Blight, Healthy), helping farmers prevent crop loss.
- Achieved 95% accuracy with an AI-powered TensorFlow/Keras model, improving agricultural decision-making and yield reliability.
- Integrated prediction API with a clean UI, delivering instant results with confidence scores to end users.
- Tech Stack: Python, FastAPI, TensorFlow, Keras, React.js, JavaScript, and CSS3.

EDUCATION

Master of Science, Computer Science, 3.85/4 GPA, Aug 2023 – Apr 2025
Michigan Technological University

Bachelor of Technology, Computer Science, 3.39/4 GPA, Jul 2016 – May 2020
University of Engineering and Management

LEADERSHIP & INVOLVEMENT

- **Research Assistant** at Michigan Technological University — Jun 2025 – Present
- **Graduate Student Assistant** at Michigan Technological University — Aug 2024 – Dec 2024
- **Student Supervisor** at WADS Dining Services — Jan 2024 – Jun 2024
- Member of the **Indian Student Organization** of Michigan Tech — Aug 2023 – Apr 2025
- **Volunteer** in Cognizant Outreach events. — Sept 2020 – Jun 2023