

Mehul Sharma

Full-stack software engineer specializing in backend development with Python and JavaScript. Experienced in building scalable REST APIs, implementing AI-powered systems, and deploying cloud-native applications. Strong foundation in database design, authentication systems, and modern DevOps practices with a focus on delivering impactful, production-ready solutions.

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🔗 <https://mehul-portfolio-red.vercel.app/>

WORK EXPERIENCE

Curtin Health

Backend Engineer

June 2024 - Dec 2024

- Developed a comprehensive backend system enabling nurses, doctors, and patients to manage health tests across multiple facilities, supporting 500+ daily test requests
- Integrated 15+ test types including cardiovascular, vitals, and endocrine screenings with standardized data models
- Designed and implemented a normalized database schema using PostgreSQL with 20+ tables, reducing data redundancy by 40%
- Implemented secure REST APIs with JWT authentication and role-based access control, ensuring HIPAA-compliant data handling
- Collaborated with frontend team using Agile methodology, delivering features in 2-week sprints

EDUCATION

University of Melbourne

Computing & Software Systems

2021 - 2024

- University College 2022-2023
- Cricket Team, Football Team

National Public School, Singapore

International Baccalaureate

2021

- Football Team, Quiz Team

PROJECT

AI Resume Sorter (Python, TensorFlow, FastAPI, PostgreSQL)

- Built an AI-powered microservice that parses resumes and ranks candidates against job descriptions with 85% accuracy
- Applied NLP techniques (TF-IDF + cosine similarity) to compute candidate-job fit scores, processing 100+ resumes in under 2 seconds
- Exposed REST APIs with Swagger/OpenAPI documentation; containerized with Docker for consistent deployment across environments
- Implemented PostgreSQL database for storing parsed resume data and job matching history

Path Visualizer (React, TypeScript, Tailwind CSS, Vite)

- Interactive algorithm visualizer for pathfinding algorithms (Dijkstra, BFS, DFS, A*) with real-time animated exploration
- Developed intuitive grid editor supporting drag-and-drop start/end placement, wall drawing, and maze generation
- Displayed performance metrics including runtime, visited nodes count, and optimal path length for algorithm comparison
- Deployed with CI/CD pipeline on Vercel, achieving 95+ Lighthouse performance score
- Github: <https://github.com/BruceWayne733/path-visualizer>
- Live Demo: <https://path-visualizer-beryl.vercel.app/>

Portfolio Website (React, Next.js, Tailwind CSS)

- Personal portfolio showcasing projects, technical blog posts, and professional experience with responsive design
- Implemented server-side rendering with Next.js for improved SEO and load performance
- Automated deployment pipeline with Vercel integration for continuous delivery
- Live Demo: <https://mehul-portfolio-red.vercel.app/>
- Github: <https://github.com/BruceWayne733/mehul-portfolio>

SKILLS

- Languages: Python (Advanced), JavaScript (Advanced), Java (Intermediate), TypeScript, SQL
- Frameworks & Libraries: React, Node.js, FastAPI, Next.js, Express.js, Tailwind CSS, TensorFlow
- Databases: PostgreSQL, SQLite, MongoDB
- Tools & Platforms: Docker, Git, GitHub Actions, AWS (EC2, S3), Vercel, Postman, Swagger
- Core Competencies: REST API Development, JWT Authentication, Database Design, CI/CD, Agile/Scrum, Unit Testing, Design Patterns (GRASP, GoF), NLP, Microservices Architecture