Dhruv Khatri

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Skills

Programming Languages: C++, JavaScript, TypeScript, Python
Frontend: React, Next.js, Tailwind CSS
Backend & Databases: Node.js, Express.js, gRPC, REST APIs, OAuth 2.0, JWT, PostgreSQL, MongoDB
Developer Tools: Git, GitHub, Docker, Linux

Projects

Smart Mirror
Tech Stack: Raspberry Pi, Next.js, Web Speech API, Google Gemini API
GitHub: [smartMirror](#)

- Reduced boot time by ~40%, achieving sub-20s startup on Raspberry Pi.
- Delivered real-time weather, calendar, and news widgets in Next.js with 1-min auto-refresh.
- Enabled 10+ voice commands (e.g., "show news") via Web Speech API; Gemini API replies in <500ms.
- Cut memory usage by ~35% vs MagicMirror² using tree-shaking and optimized bundling.

numNet — Deep Learning Framework from Scratch
Tech Stack: Python, NumPy
GitHub: [numNet](#)

- Built a PyTorch-like deep learning framework from scratch using NumPy.
- Implemented automatic differentiation, core layers, and standard optimizers.
- Designed modular architecture for educational experimentation and deep learning fundamentals.

BetterReads API - Book Review Platform Backend
Tech Stack: Node.js, Express.js, Prisma ORM, PostgreSQL, JWT, bcrypt.js
GitHub: [BetterReads](#)

- Built backend supporting ~50k books and ~10k user reviews (tested on synthetic data).
- Implemented JWT authentication and protected CRUD APIs for users, books, and reviews.
- Designed PostgreSQL schema with Prisma for fast queries and scalable concurrent access.

Achievements & Certifications

- **Competitive Programming** — Solved 400+ algorithmic problems across **LeetCode** and **Codeforces**, attaining a **Pupil** rating (1200–1400) on Codeforces.
- **Hardware Hackathon (2023)** — Designed and implemented a Smart Mirror prototype using a Raspberry Pi within a 24-hour hackathon.
- **Data Structures and Algorithms in C++ & System Design** — Coding Blocks, Certificate of Excellence.
- **Web Development using MERN Stack** — Coding Blocks, Certificate of Completion.

Education

Bhagwan Parshuram Institute of Technology   Sept 2022 – June 2026
Bachelor of Technology in Electronics and Communication Engineering   *CGPA: 6.55/10*

Siddhartha Public School   Graduated: May 2022
Senior Secondary Education (Class XII) — CBSE Board   *Percentage: 87%*