

AYUSH CHAVAN

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EDUCATION

Vishwakarma Institute of Technology Pune

B.Tech - Computer Science and Engineering(Artificial Intelligence) - CGPA - 8.58

09 2023 – 06 2027

Pune, Maharashtra

PROJECTS

God's Hand (Rubiks Cube Solver in C++)

Github

Tech stack - C++ | Pistache | RapidJson

- Engineered a Rubik's Cube Solver using the **IDA*** Korf algorithm, achieving **optimal solutions** (avg. 18 twists). Recorded an **average solution time of 8.44 hours** for 10 random 100-move scrambles.
- Optimized memory by up to **60%** using **bitwise data handling**, reducing usage from 160MB to 84MB.
- Boosted runtime efficiency by up to **75%** via **iterative deepening** and **heuristic pruning**, outperforming baseline methods.

Real-Time Collaborative Whiteboard ↗

Github

Tech stack – Next.js | React | TypeScript | Liveblocks | Convex | Clerk | Tailwind CSS

- Built a **real-time, multi-user whiteboard** enabling instant shared drawing, live cursor presence, and undo/redo history.
- Designed and implemented a full toolset—**pen, eraser, shapes (rectangle, ellipse), text notes**, and smooth **zoom** controls—for versatile visual collaboration.
- Structured the codebase into **modular React components** and **custom hooks** for drawing logic, selection bounds, and collaborative state synchronization.
- Integrated **Liveblocks** for low-latency state sharing, **Convex** for scalable backend persistence, and **Clerk** for seamless, secure user authentication.

Blogify - Comprehensive Blogging Platform ↗

Github

Tech stack - Javascript | Node.js | Express.js | MongoDB | EJS | Bootstrap | Firebase | JWT

- An **intuitive and secure platform** for crafting, managing, and engaging with blogs.
- Built using **MVC architecture**, employing EJS and Bootstrap for a **responsive UI**.
- Implemented **JWT-based authentication** and **custom encryption**, with Firebase for **media handling**.

TECHNICAL SKILLS

Languages: C, C++, Javascript, SQL, Java, HTML, CSS, Typescript

Developer Tools: VS Code, Postman , GitHub , CMake, Clerk, Convex

Technologies/Frameworks: NodeJS, ExpressJS, ReactJs, NextJs, Git, MongoDB

CourseWork/Skills: Data Structures & Algorithms, Web Development, Database Management System (DBMS), Problem Solving, Object Oriented Programming, Competitive Programming

ACHIEVEMENTS

- ICPC Asia West Regionalist (2025–2026)**
- Achieved **First Runner up** among **450+ teams** at InC Pradnya 2025 (Global Competitive Coding Competition) at PICT, Pune
- Secured 1st Position** in Prelims and **4th Position** in Onsite Finals of **WCPC 2025** (State Level Competitive Programming Contest) held at Walchand College, Sangli
- Secured **AIR 90, 104, 141** in LeetCode's Biweekly contest 155, 161, 160
- Secured **Global Rank 62** and **Global Rank 90** in Codechef Starters 132 and Starters 157
- Solved **1400+** problems on Codeforces and achieved rank **Specialist (Max Rating: 1553)**
- Guardian** on LeetCode (**Max Rating : 2143**), among **Top 1.2 %** globally and solved **700+** problems
- 4 Star Coder** on Codechef (**Max Rating: 1817**)

CODING PROFILES

- Codeforces ↗
- LeetCode ↗
- Codechef ↗
- HackerRank ↗
- SPOJ ↗