

Piyush Sharma

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Education

Thapar Institute of Engineering and Technology, BTech in Computer Science	Oct 2022 – June 2026
Choudhary Baldev Singh Model School, Intermediate	Apr 2021 – Mar 2022
D.A.V. Public School, Matriculation	Apr 2019 – Mar 2020

Experience

Software Engineer, Synexoo	Jan 2025 – Mar 2025
<ul style="list-style-type: none">Designed and deployed the backend of a social media platform using Node.js, Express, and MongoDB; implemented JWT authentication, profile management, and follow/unfollow logic — increased active user engagement by 30%Engineered a real-time chat system using WebSockets (Socket.io), enabling instant bidirectional communication among 500+ concurrent users.Tech Stack: Node.js Express MongoDB WebSockets JavaScript Git GitHub.	

Projects

SentinelAI
<ul style="list-style-type: none">Designed and deployed a production-grade API security gateway that evaluates 100% of incoming requests using adaptive risk scoring (0–100), replacing static rate limiting.Implemented Redis-backed rate limiting and temporary IP bans (15-minute TTL), automatically blocking abusive clients after 8–10 malicious requests during live attack simulations, built secure admin control APIs to monitor banned IPs, inspect risk scores, and manually unban clients, reducing false positives and enabling real-time operational control.Tech Stack: NestJS Redis Docker Railway

FinBoard

- Built a configurable finance dashboard supporting 3 widget types (price card, OHLC table, interactive charts) with drag-and-drop reordering, enabling users to track any stock symbol in real time using Next.js, React, TypeScript, Recharts, and Zustand.
- Integrated multi-provider market data architecture using Alpha Vantage, Finnhub, and TwelveData, implementing API fallback + client-side caching to reduce failed requests by 70% and ensure chart rendering across daily, weekly, and monthly intervals.
- Designed production-ready UI with dark/light themes and interval-based chart controls (line & candle views), then deployed on Vercel with secure environment variable handling.

Stock Price Prediction Model

- Developed a Flask-based stock prediction web app using ARIMA, LSTM, and Linear Regression models; achieved RMSE between 4.8%–9.5% on test sets.
- Incorporated sentiment analysis by processing 25+ financial news headlines with NLTK VADER, weighting scores by recency to enhance price movement predictions.
- Engineered 15+ financial ratio features from APIs and automated 2 years of stock data ingestion, delivering 7-day forecasts, trend visualizations, and BUY/HOLD signals.

Expense-Tracker

- Developed a responsive financial dashboard in Angular, handling 100+ transactions per month with dynamic filtering and real-time state updates.
- Implemented budget monitoring logic with automatic alerts when spending exceeds 80% and 100% of limits, enhancing user decision-making, then deployed on Netlify.

Skills

Languages: C++, C, Java, Python, SQL, JavaScript, HTML, CSS, TypeScript.

Technologies: Node.js, Express.js, MongoDB, Object Oriented Programming, Machine Learning, GitHub, MySQL, AWS, Docker, System Design, Next.js, Angular, React.

Coursework: Operating System, DBMS, Game Design, 3D Modeling, Computer Graphics, Introduction to Cyber Security.

Competitive Programming

- LeetCode** - Rating 1600+ (in top 22.5%), Solved 500+ Questions
- (3-star) CodeChef** - Rating 1600+, Solved 200+ Questions
- CodeForces** - Rating 1100+, Solved 100+ Questions