PARTH TIWARI

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OBJECTIVE

Aspiring Software Engineer with strong AI, backend, and full-stack experience, seeking impactful roles to build intelligent, scalable, and secure systems.

EDUCATION

Chandigarh University, Bachelor Of Engineering in Computer Science, CGPA (7.76) 2021–2025

SKILLS

Languages	C/C++, Python, Java, JavaScript, TypeScript
Frameworks & Tools	React.js, Express.js, Node.js, MongoDB HTML, CSS3, Bootstrap, Tailwind, SpingBoot RESTful APIs, Flask, FastAPI
Database	Oracle, MongoDB, SQL/MySQL ,
DevOps & CI/CD	Git/GitHub, GitLab, Postman, GCP (Google Cloud Platform) , Docker ,
Fundamentals	DBMS, Software Engineering, Networking, Data Structure and Algorithm, Operating System
AI	Agentic AI ,OpenAI Agents SDK, CrewAI, LangGraph, AutoGen and MCP

EXPERIENCES

Smarter.Codes July 2025 – Present
Full Stack Developer

- Developed and enhanced dashboard features for the Algil Marketplace platform using React.js and Python, improving usability and overall UI responsiveness.
- Implemented new functionalities and resolved critical bugs in production, ensuring a smoother user experience and reliable feature delivery across merchant tools.
- Contributed to the development and debugging of the AutoMapping feature, improving automated data integration and reducing manual mapping errors by 40%.
- Worked in alignment with agile methodologies and Synterex's AI-driven initiatives, including support for AgileWriter, to enhance the accessibility and efficiency of clinical documentation workflows.

Jungleworks May 2025 – June 2025
Associate Software Developer Intern

- Debugged critical issues and resolved performance bottlenecks using React DevTools, Chrome Lighthouse, and network profiling tools to enhance frontend responsiveness.
- Refactored merchant dashboard UI with React.js and optimized Redux state handling, improving load speed and user interaction consistency by 30%.
- Enhanced backend performance by optimizing Express.js middleware, improving MongoDB query indexing, and reducing API response times.
- Collaborated on integrating WebSocket-based real-time updates across delivery workflows, improving system consistency in high-concurrency environments.

Zeal Web Technologies June 2024 – May 2025
Software Developer Intern

- Engineered a low-latency order execution system, leveraging lock-free queues, NUMA-aware threading, and cache-line optimization, reducing trade execution time by 50%.
- Integrated FIX 4.4/5.0 and WebSocket APIs for high-frequency market data ingestion and order routing, achieving sub-100µs end-to-end latency.
- Designed a custom memory allocator optimized for zero heap fragmentation, reducing allocation overhead by 40% and improving throughput under high load.
- Developed an epoll-based asynchronous networking stack with zero-copy data transmission (mmap, sendfile) for TCP/UDP order flow, boosting data processing efficiency.
- Optimized critical execution paths using assembly-level profiling (perf, VTune, gdb) and SIMD intrinsics, enhancing computational efficiency in time-sensitive operations.

PROJECTS

College Recommendation System *React.js, Express.js, MongoDB, Node, Tailwind CSS*
Developed a high-accuracy (99%) College Recommendation System using React.js, Node.js, Express.js, and MongoDB Atlas, enabling students to find government colleges based on their JEE rank.

- Designed a responsive, interactive card-based UI with Tailwind CSS, supporting real-time search, filtering, and comparison of colleges by rank, fees, and placement data.
- Built and integrated a RESTful API to fetch data from MongoDB and power an optimized algorithm that ranks and recommends colleges dynamically.
- Enabled a peer-connect feature allowing users to interact with current students for deeper insights, enhancing the decision-making process.

Semantic Search Web Application *React.js, FastAPI, Web Scraping, Weaviate, OpenAI API*

Built a full-stack semantic search engine using React and FastAPI, integrating Weaviate and OpenAI embeddings for intelligent content retrieval.

- Implemented a pipeline to scrape and chunk HTML content from user-provided URLs, convert text into vector embeddings, and store them in Weaviate for efficient similarity search.
- Enabled top-k semantic search functionality by processing natural language queries and returning the top 10 most relevant content blocks with cosine similarity match scores.
- Designed a responsive, dynamic single-page React UI to render results in real time, with support for both local testing and remote deployment environments.

EXTRA-CURRICULAR ACTIVITIES

- Completed **J.P. Morgan Software Engineering Virtual Experience** via Forage, simulating real-world engineering tasks to visualize live financial data.

LEADERSHIP

- **Runner-up, Hackathon Sponsored by HP Power (Unstop)** – Proposed an innovative green energy solution for sustainable power usage in industrial sectors. Recognized for practical implementation strategy, collaboration, and impactful presentation.