

Pushpdeep Singh

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Education

Maharaja Agrasen Institute of Technology

Bachelor of Technology in Information and Technology (GPA of 8.7)

2020-2024
Delhi, India

Experience

Z1-Tech

August 2024 – Present

Software Developer | Gurgaon, India

- Built an AI-driven Compliance Check System using **Python** (Flask), **OpenAI fine-tuned models**, **MySQL**, **Redis Queue & Workers**, and **BigQuery** to automatically review ad campaigns for Google Ads, Facebook, and Taboola policies; integrated asynchronous task processing, data caching, continuous model retraining pipelines, and data-driven optimization workflows to improve accuracy, scalability, and ensure full policy compliance through systematic experimentation.
- Built an anime-based multi-bot chat application using **Python** (Flask), **OpenAI GPT models**, **Redis Vector Store**, **FAISS**, and **RAG** for contextual, character-driven conversations; implemented **event streaming** for real-time interactions, integrated ads for monetization, and deployed the platform to serve hundreds of active users daily—leveraging unstructured text analysis and **NLP techniques** to enhance dialog quality and behavioral patterns of characters.
- Worked on GCP services like **Redis MemoryStore**, **BigQuery**, and **Cloud Functions** to scale content generation and user redirection systems handling millions of requests daily; applied qualitative and **quantitative data-driven** methodologies to prioritize and enhance AI workflows across services.
- Created the Turbo Campaign Creator Tool using Python, MySQL, Redis, and **WebSockets**, enabling auto-generation of 10,000+ ad campaigns daily (Google Ads, Taboola, etc.) with webhook notifications and in-house media assets; incorporated **ML-driven** insights and iterative experimentation to optimize campaign quality and generation speed.
- Developed the WOZ Dashboard with **React.js** and Bootstrap, enabling teams to track user conversations, analyze sentiment, and view real-time insights to improve engagement and performance.
- Designed and executed data analysis workflows using **AI/ML and LLM**-based techniques to extract insights from large volumes of unstructured text, identify policy risks, improve model behavior, and support data-driven decision-making for standalone AI products and internal stakeholders.

Internships

IntelliAssist

June 2024 – July 2024

Software Developer Intern | Gurgaon

- Developed and deployed RESTful APIs using Node.js, Express.js, and MongoDB, hosted on Microsoft Azure for scalable and reliable performance.
- Integrated Shopify APIs for merchant OAuth authentication, product retrieval, shopping cart management, and checkout functionalities.
- Configured and handled Shopify webhooks to enable real-time updates on orders, carts, and customer events using Azure Functions.
- Implemented custom middleware for request validation and error handling; followed CI/CD practices with GitHub Actions for automated testing and deployment.

Shoppeal Tech

Dec 2023 – Feb 2024

Software Engineer Intern | Mumbai

- Built and managed RESTful APIs using Node.js, GraphQL, and CMS integrations, ensuring efficient data flow and content delivery.
- Designed and implemented scalable, flexible, and maintainable API endpoints following REST architecture best practices.
- Integrated backend APIs seamlessly with Next.js frontend applications to optimize data exchange, performance, and system reliability.

10X Academy

Sep 2022 – Mar 2023

Software Developer Intern | Remote

- Specialized in frontend development using React.js and Next.js, delivering scalable, responsive, and high-performance web applications.
- Contributed to developing an AI-powered student chatbot using OpenAI APIs, improving personalized learning and automated support experiences.
- Implemented OAuth authentication workflows on the backend to ensure secure, reliable, and efficient user access management.

Projects

[GitHub Link](#)

Snappy | React JS, NodeJS, MongoDB, ExpressJs, WebSocket

- Developed a real-time messaging system using WebSocket (Socket.io) to enable persistent, low-latency, full-duplex communication between clients and servers.
- Built the frontend in React.js with efficient state management and a component-based architecture for dynamic UI updates and smooth chat interactions.
- Architected a scalable backend using Node.js and Express.js, implementing RESTful APIs, JWT-based authentication, and event-driven socket handling.
- Utilized MongoDB with Mongoose for schema modeling to store chat logs, user sessions, and conversation metadata, with optimized indexing for faster queries and retrieval.

Achievements

- HackOn with Amazon: Developed innovative tech solutions addressing real-world challenges in a competitive hackathon organized by Amazon.
- Namma Yatri Open Mobility Challenge: Built an assistive product to support specially-abled individuals, showcasing innovation and social impact. Architected a scalable backend using Node.js and Express.js, implementing RESTful APIs, JWT-based authentication, and event-driven socket handling.
- EY Techathon 4.0: Participated in a 36-hour hackathon demonstrating strong technical expertise, team collaboration, and problem-solving skills.
- Pinnacle Performer Award: Recognized as a Pinnacle Performer for outstanding contribution and performance twice in the last three quarters.

CourseWork & Technical Skills

Frontend: JavaScript (ES6+), React.js, Next.js, Tailwind CSS, Bootstrap, Vite, GSAP Animations, REST/GraphQL API Integration.

Backend: Node.js (Express, Socket.io), Python (Flask, FastAPI), GraphQL, REST APIs, WebSocket (SSE & Socket.io), JWT/OAuth 2.0 Auth, Event Streaming, Microservice Architecture, Webhook Integrations.

Databases & Caching: MongoDB (Mongoose), MySQL, Redis (Queue System, Workers, Vector Store), BigQuery, ClickHouse, Google Cloud MemoryStore, FAISS, Data Indexing & Search Optimization.

AI / GenAI: OpenAI GPT-4o API, LangChain, Hugging Face Transformers, Retrieval-Augmented Generation (RAG), model fine-tuning on Open AI.

DevOps & Cloud: Google Cloud Planorm (Functions, Container App, Cloud Run), Docker, Linux (AlmaLinux, Ubuntu), Git, GitHub Actions, Bitbucket Pipelines, CI/CD.

Core CS: Data Structures & Algorithms, Object-Oriented Programming, DBMS fundamentals, Operating Systems