

Darsh

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EDUCATION

Indian Institute of Technology Jammu

Bachelor of Technology - Computer Science and Engineering; CGPA: 7.07

Jammu & Kashmir, India

Nov. 2021 – May 2025

Govt. Sarvodaya Co-Ed Vidyalaya

Class XII; Percentage: 95.60%

Delhi, India

Apr. 2019 – Mar. 2020

Naveen Public School

Class X; Percentage: 90.80%

Delhi, India

Apr. 2017 – Mar. 2018

TECHNICAL SKILLS

Programming Languages: C++ , SQL, JavaScript, Python, TypeScript

Tools & Technologies: Linux, GitHub, AWS, Postman

Web Development: HTML, CSS, Node.js, Express.js, MongoDB, React.js, Next.js, PostgreSQL

Relevant Courses: Data Structures & Algorithms, Database Management Systems, Operating Systems, Object Oriented Programming, Cloud Computing , Computer Networking

PROJECTS

AskMyPDF

Developer

[GitHub](#)

[Live Demo](#)

- Engineered a full-stack AI-powered PDF chat application using Next.js, TypeScript, and the OpenAI API to enable intelligent document interactions.
- Implemented document vectorization and retrieval using Pinecone for relevant AI-generated responses.
- Built a subscription-based payment system with Stripe and leveraged webhooks for real-time updates.
- Optimized API calls and response caching with @tanstack/react-query, enhancing performance and reducing OpenAI API costs.
- Deployed a scalable, serverless architecture on Vercel with Neon PostgreSQL for cloud-native scalability.
- Technologies used: Next.js, React, TypeScript, Tailwind CSS, Clerk, Drizzle ORM, PostgreSQL, AWS, OpenAI API, Stripe, Pinecone, Drizzle-kit, OpenAI Edge, Neon Database, @tanstack/react-query.

Hotel Booking App

Developer

[GitHub](#)

[Live Demo](#)

- Architected a scalable MERN-stack hotel booking platform with a seamless, intuitive user experience.
- Orchestrated secure JWT-based authentication and HTTP cookie handling for data integrity.
- Integrated the Stripe API for payment processing and utilized webhooks to handle real-time bookings.
- Optimized database queries for advanced search, sort, and filter features to improve performance.
- Designed a responsive, dynamic homepage displaying real-time updates through Restful APIs.
- Technologies used: MongoDB, Express.js, React, Node.js, JWT, Stripe, REST APIs, Cloudinary, CSS.

Data Plane Development Kit (DPDK) with Open5GS

Final Year Project

- Deployed a 5G core using Open5GS on isolated Linux VMs with modular Network Function separation.
- Integrated DPDK with the User Plane Function, increased throughput and reduced latency by 50%.
- Conducted network performance evaluation using SockPerf to measure KPIs such as latency.
- Developed an ML-based IDS using the CICIDS 2017 dataset for real-time threat detection.
- Achieved a secure, high-performance 5G core by integrating DPDK and ML-based anomaly detection.

ACHIEVEMENTS & EXTRACURRICULAR ACTIVITIES

- Achieved first place at the Zonal level in CBSE Class 12th Examination
- Participated in Ministry of Panchayati Raj's Drone Software Challenge at Inter-IIT Tech Meet 12.0, representing IIT Jammu
- Represented CSE department in Chess at the PRAVAAH the official sports fest of IIT Jammu