Aviral Asthana

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Education

Indian Institute of Information Technology, Nagpur, B.Tech in Computer Science   Nov 2022 – May 2026

- CGPA: 7.74/10.0
- **Coursework:** Data Structure and Algorithms, Computer Architecture, Design and Analysis of Algorithms, Linear Algebra, Discrete Math, Probability and Statistics, Operating Systems, Database Management Systems and Computer Networks

Experience

Web Developer Intern, Codestam Technologies   March 2024-April 2024

- Worked as a full stack developer and team lead gaining hands-on experience in tech and leadership.
- Contributed to various impactful projects and developed multiple web applications like Chat apps, E-commerce apps, and administrative management systems with store facility and deployed on Amazon Web Services(AWS) Cloud.
- Enhanced Socket functionality in Chat system for smooth chatting experience.

Winner, Hack-4-Future Hackathon (SBU Ranchi,January 2024)   February 2024

- Led team "StrawHats" to victory with project "ECHO", demonstrating exemplary proficiency in development.

Achieved maximum rating of 1793 on LeetCode   2024

Open Source Experience

Layer5   July 2024-present

- As a Layer5 Contributor's Team member, I contributed to three projects: Meshery, Sistent, and the Layer5 platform.
- Enhanced five MesheryCTL commands, including those that now support multi-word filter names and detect the source type of the imported patterns automatically.
- Worked on migrating the Layer5 website to Gatsby V5 and React 18.
- Improved Documentation of various projects in Layer5 and learned about Distributed systems.
- Contributing to Layer5 has significantly advanced my professional development.

Projects

API Rate Limiter   github.com/Aviral0702/ARL

- Developed a middleware-based rate limiter using Redis to control API request traffic, ensuring no more than 100 requests per hour for each API key. Also, integrated query optimization using Redis Cache.
- **Redis Integration:** Integrated Redis as a fast, in-memory key-value store for tracking API request counts, improving the scalability and efficiency of the rate-limiting system.
- **Dockerized Environment:** Deployed Redis using Docker containers for isolated and efficient service management with easy scalability. Implemented a GitHub CI/CD pipeline for deployment workflows.

ByteBazaar   github.com/Aviral0702/BB

- Developed a SaaS Marketplace for software products:
  1. Implemented AI-powered RAG bot for automation of personalized product recommendations
  2. Created web scraping tool for efficient product listing
  3. Built comprehensive admin dashboard for order and inventory management
  4. Deployed on Google Cloud Platform using Docker
- Tools Used: Next.js, React, Node.js, Docker, GCP, AI/ML, Web Scraping

Golang REST API with Docker and Helm   github.com/Aviral0702/Go

- Developed a scalable and efficient REST API using Go programming language and containerized the application using Docker for consistent deployment and created Helm Chart for streamlined Kubernetes infrastructure deployment and management.

Technologies

Languages: C++, JavaScript, Go, Python
Technologies: HTML, CSS, Flask, Express JS, ReactJS,NextJS
Database: MongoDB, PostgreSQL, Redis
Containerization and Management: Docker, Kubernetes