Harshan

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Profile

Dedicated and motivated B.Tech student pursuing a degree in Computer Science, with a strong passion for technology and a desire to contribute to the ever-evolving field of computer science. My strengths include excelling in collaborative environments, adapting rapidly, and consistently delivering results, even when faced with challenging project timelines.

Education

PES University - Bangalore, India   **December 2021 - Present**
Bachelor of Technology: Computer Science   *CGPA: 9.25/10*
Sri Vidya Mandir Education Society   **February 2019 - April 2021**
High School   *XII : 97.3*

Technical Skills

Languages: Python, JavaScript, C, C++
Web-Frameworks: HTML5, CSS3, ReactJS, NodeJS, Express
Tools: Git,Docker,Kubernetes,Hadoop, Kafka

Projects

Synergistic EcoSystem for Education and Recruitment | *ReactJS,Apache Kafka,LangChain,LLM's*   **Ongoing**
- ***Developing a Collaborative Platform for Education and Recruitment***: Implementing a web application to bridge the gap between students, universities, and recruiters, facilitating communication and collaboration among these stakeholders.
- ***Implemented Tailored Learning and Course Recommendations:***: Leveraging LangChain and Kafka to analyze student profiles and recommend relevant courses, ensuring skill alignment with industry demands and individual academic goals.
- ***Industry-University Course allignment***:Analyzed top university course syllabi from Coursera, enabling dynamic syllabus updates for universities based on real-time industry insights.
- ***Optimized Talent Matching for Recruiters***:Leveraging LangChain to facilitate the retrieval of data from Job Descriptions, Resumes and utilizing Large Language Models (LLMs). This enabled efficient parsing and extraction of relevant information to match student skills with recruiter requirements.

Microservice-based Code Compilation and Execution Platform | *Javascript,Express,AWS,Redis*   **June-July 2024**
- ***Microservice Architecture and Scalability***: Architected a high scalable microservices-based platform for code compilation and execution, ensuring seamless scalability and high availability using AWS.
- ***Dynamic Problem Administration***:Built a Problem Admin Service using JavaScript,Express and MongoDB to manage CRUD operations for problems,incorporating complex test cases and code stubs to facilitate evaluvation
- ***Advanced Code Execution***: Developed a Evaluvator Service in TypeScript and Express, leveraging Docker containers to support multi-language code execution. Employed Strategy and Factory design patterns to optimize execution and mange TLE conditions
- ***AWS Deployment and Operational Excellence***:Deployed the entire system on AWS, utilizing auto-scaling groups,load balancers,and monitoring tools to ensure optimal performance,fault tolerance

YADFS | *Python, Linux*   **August 2023**
- ***Distributed Storage System Architect***: Implemented data nodes for efficient storage and retrieval, complemented by a resilient name node with 100% uptime.
- ***Fault-Tolerant Data Handling***: Engineered fault-tolerance mechanisms, including a replication strategy and continuous health checks for DataNode reliability.
- ***User-Centric Interface Developer:***Designed an intuitive client interface, empowering users to perform operations like directory creation, file management, and seamless uploads/downloads.

Microservice-based Airline Booking System | *Javascript,NodeJS,AWS,RabbitMQ*   **January 2024**

- ***Flight Management Service***: Developed a comprehensive Flight Service to manage CRUD operations for flights. Implemented robust SQL migrations for effective database versioning and management.
- ***User Authentication Service***: Created a secure User Service for user authentication using JWT tokens. Incorporated bcrypt for password encryption, ensuring high security and data protection.
- ***Booking Service with Concurrency Control***: Engineered an advanced Booking Service to handle flight reservations. Implemented a sophisticated seat selection mechanism and ensured data integrity with concurrency control using transactions and locks.
- ***Notification Service with RabbitMQ***: Developed a Notification Service to handle messaging, utilizing RabbitMQ for efficient message queuing and processing.

Certifications

MRD Scholarships: Awarded a 40 % tuition fee waiver for achieving 8.98 and 9.41 SGPA in semesters 1 and 2, placing in the top 15 % of the batch.

CNR Scholarships: Awarded a 50 % tuition fee waiver for achieving 9.55 and 9.59 SGPA in semesters 3 and 4, placing in the top 15 % of the batch.