Vaidehi Kalra

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Education

Rochester Institute of Technology, New York **Expected May'24**
Master of Science in Computer Science *GPA : 3.56*
Poornima Institute of Engineering & Technology, India **Aug'16-Sep'20**
Bachelor of Technology in Computer Science & Engineering *GPA : 3.2*

Technical Skills

Programming Languages: Java, Python, XML, Shell, Cypher Query Language, SQL, Rust, HTML5, Javascript
Technologies : REST APIs, JSON
Clouds & Databases: MySQL, MongoDB, SQLite, Neo4j, Redis, AWS
Framework & Libraries: React Native, ReactJs, Docker, Springboot
Tools: Gradle, GIT, Postman, Eclipse, PyCharm, IntelliJ IDEA, MS-Office

Professional Experience

Software Engineering Intern - London Stock Exchange Group, Buffalo, NY **Sep'23-Present**

- Developed and integrated a user-friendly module for generating JSON requests within a Springboot application, using HTML5, CSS, and JavaScript, replacing the need for external Postman usage.
- Implemented dynamic page additions and interactive features in the application through advanced JavaScript techniques, enhancing user engagement and functionality.
- Integrated existing Spring Boot services for user license validation into the new module, facilitating secure and authorized request processing within the application.
- Utilized Handlebars.js for displaying form data and results in a structured JSON format, effectively bridging front-end user inputs with backend data processing.

Freelance Developer - Orion Solutions, India **May'20-Aug'20**

- Executed the development of the Navodaya school application on a contract basis, meeting strict deadline of three months.
- Leveraged the power of Ionic and AngularJS to expertly implement a visually captivating Neomorphism design, enhancing the user experience and interface aesthetics.
- Empowered users with a comprehensive feature set, including personalized feeds, real-time student updates, college news, and seamless chat functionality.

Projects

Graph Pattern Matching (Subgraph Isomorphism) **Aug'22-Dec'22**

- Implemented a subgraph isomorphism algorithm using the Cypher Query Language, initially taking 90 minutes for completion.
- Optimized the algorithm through programmatic approaches, incorporating Candidate Computation, Computing Processing order, and Backtracking techniques.
- Achieved a 30% performance boost by implementing local and global candidate pruning based on labels, neighbor profiles, and labels of neighbors.
- Reduced processing time to 15 minutes by strategically optimizing the processing order, ensuring connectivity with previous nodes, and adopting a cost-reducing approach.

Vehicle Search Application **Apr'23**

- Designed and developed a high-performance search application using MongoDB, ReactJS, and Hooks, capable of handling a dataset of 60,000 documents.
- Implemented efficient backend processing with Python and Flask, ensuring seamless integration with MongoDB and enabling optimized indexing for enhanced search performance.
- Leveraged geospatial features of MongoDB to enable precise record retrieval within specified areas, enhancing search capabilities and user satisfaction.

Candy shop- Infrastructure as a service **Apr'22**

- Orchestrated the construction, design, and execution of an advanced Infrastructure-as-a-Service (IaaS) platform.
- Engineered four high-performing services, encompassing monitoring & alerting, logging and event streaming, as well as an optimized in-memory database in Rust, driving operational efficiency, data replication prevention, and server load mitigation.