SANATH KUMAR BAJJURI

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EDUCATION

Stony Brook University, Stony Brook, NY ***Master of Science, Data Science*** **Aug 2023 - Present**

Course Work (*Computer Networking, Artificial Intelligence, Machine Learning, Database Systems***)** **CGPA : 4.0**

WORK EXPERIENCE

Software Engineer, *ZeMoSo Technologies Pvt Ltd* **Jul 2022 – Jul 2023**

- Implemented a project management tool, **similar to Jira**, built user interfaces using **React JS** to create and display a list of tasks, comments, also initiated **redux**, and **saga** for state management to handle large datasets, reducing 30% of network calls.
- Created over 40 reusable React JS components and published them to the NPM registry, enabling usage across more than 6 teams, and also adhering best practices including **ES6 features**, custom hooks, **Theming**, **Material UI**, life cycle methods.
- Built CRUD APIs for tasks, comments, and history using **Node JS, PostgreSQL** and **Knex**, employing the **Factory Design Pattern** with over 85% test case coverage and also migrating databases from NoSQL to SQL, orchestrating data transitions efficiently.
- Initiated **SQS message queues** for inter-service communication, resulting in **40%** reduction of inter-service latency, **Redis cache aside**, reducing response time by 400ms, and introduced email and slack **notifications service** for task updates and deadlines.

Associate Software Engineer, *ZeMoSo Technologies Pvt Ltd* **Jun 2021 – Jun 2022**

- Developed an user interface designed for creating and updating reconciliation rules and rulesets, cron expression jobs to automate the reconciliation process with **drag-and-drop** functionality, led to a 60% increase in rule setup efficiency .
- Implemented an advanced **nested multiselect filter** utilizing data structures (**graphs**), for a 30% reduction in time complexity.
- Optimization of performance by 20% using **functional components**, **debouncing**, **throttling**, **memoization**, and **webpack**.
- Architectured **Database design** for transactions reconciliation platform and created a microservice that **generates frontend UI from database records**, enabling the creation of 70% of UI screens.
- Created parallel processing using python for reconciling transactions by subset matching algorithm, reduced run time by 60%.
- Introduced feature of bulk import million rules using CSV files using **multi threading** and **opencsv** in spring boot.

PROJECTS

Green Commute | Full Stack Application | Github | Live *React, Spring Boot, MySQL, Cypress*

- Engineered Green Commute, a user-centric platform that offers job matching based on 8+ criteria including skills, location, and experience, and promotes eco-friendly commuting options.
- Developed 10+ responsive web pages for effective **job filtering, comprehensive listings,** with **google map integration**, alongside coding **CRUD APIs** for entities such as jobs, commutes, users, and companies, while also architecting the database design.

Seedar | Web Application | Github *Angular, Node JS, Express, PostGreSQL,Selenium*

- Seedar enables users to view contract lists, obtain loans for various durations, interest rates, calculate monthly payments, total repayment costs, and the user's payment schedule.
- Crafted 10 web pages and **CRUD API's** for contracts, cashkicks, users and payments using angular and node js.

Chat Application | Github | Live *React, Node JS, MongoDB, JWT*

- Constructed a web application, featuring user login and registration, online user visibility, and messaging capabilities akin to Discord, complete with authentication and encryption protocols.
- Implemented API for users and messages, shows over 10 online users using **websocket** and encrypted messages using Bcrypt.

Book Discovery | Web Application | Github | Live *React, Spring Boot, SQL, Data Analytics*

- Engineered a user-centric application that allows over 1000 users to access a list of books, enabling them to track their current reading status, personalized recommendation features to suggest relevant titles based on individual preferences.
- Built responsive web pages and 20+ CRUD API for books, users, status, categories, cart, and payments using react, spring boot.

Underwater Image Enhancement | Github *Python, Machine Learning, Neural Networks*

- Executed an image enhancement over 500 images, focusing on correcting underwater image distortions through an advanced fusion technique by histogram equalization, white balancing, gamma correction, and sharpening algorithms
- Leveraged Python, and neural networks on the GCP to develop a robust AI-driven solution for real-time image with 76% accuracy.

TECHNICAL SKILLS

Programming Languages:	Java, Python, C, C#, C++, Data Structures and Algorithms, HTML5 & CSS, JavaScript, R programming, GO.
Web Technologies:	ReactJS, Node JS, Spring Boot, Angular JS, Express, GraphQL, Kafka, Spark.
Cloud Technologies :	AWS(EC2, S3, Red Shift, RDS, Glue, Cloud Watch, EMR), Docker, Load balancer, Google Cloud Platform.
Developer Tools / OS :	Swagger, Story Book, PostMan, VS Code, IntelliJ, GitHub, Windows, Linux, Ubuntu.
Databases / QA :	MySQL, PostgreSQL, MongoDB, Jest, Junit, Cypress, Selenium, Sonar Cloud.

CODING PROFILES

Leetcode: 250+ problems HackerRank: 30,000+ Hackos (500+ problems) Interviewbit: 32,400+ (200+ problems)