KASHYAP SONI

New York

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EDUCATION

Master of Science in Computer Science and Engineering **August 2022 – Expected December 2023**

University at Buffalo, The State University of New York *Buffalo, NY*

Algorithms, Distributed Systems, Computer Security, Parallel Algorithms, Machine Learning, Data Models & Querying

Bachelor of Technology in Computer Engineering **August 2018 – May 2022**

Sardar Vallabhbhai National Institute of Technology - Surat *Gujarat, India*

TECHNICAL SKILLS

Programming Languages: Java, JavaScript, TypeScript, Go, C, C++, Python, Rust, SQL, NoSQL.
Web Technologies: Spring Boot, NodeJS, ExpressJS, MongoDB, Flask, HTML5, CSS, C#, .NET, AJAX, AWS basics.
Tools: Bash, Linux CLI, WebSocket, Git, Docker, PostgreSQL, MySQL Workbench, PGAdmin, Visual Studio
Concepts: Object oriented programming, Agile, SDLC, System design, API Gateways, Software Documentation.

WORK EXPERIENCE

Software Engineer Intern **May, 2023 – July, 2023**

E-Management Services *Princeton, New Jersey*

- Worked on design, develop, implement and test an end-to-end secure and scalable document signing API using NodeJS, ExpressJS, SQL Server, and Docker. Adhered to SDLC principles and created documentation for API usage.
- Utilized test driven development(TDD) reducing bug resolution time by 30% and wrote clear maintainable code. Devised comprehensive unit tests and conducted integration testing covering over 90% of code base.
- Developed two new end-to-end features for enterprise system software with JavaScript, Node.JS, C, and Python. Deployed HTTP web server using Python Flask for back-end and created API end-points enabling real-time updates.
- Collaborated with 2 cross-functional teams to gather requirements, implemented new features, and stress-tested using Grafana K6 ensuring timely delivery and high-quality code.
- Deployed API on AWS EC2 instance by creating and maintaining Docker containers for consistent development and production environments, ensuring a seamless transition from development to deployment.
- Streamlined software release process, reducing deployment time by 40% through the successful implementation of automated CI/CD pipelines.

Software Engineer Intern **May, 2021 – July, 2021**

Indian Institute of Management - Udaipur *Rajasthan, India*

- Developed and maintained over 20 responsive websites using JavaScript, HTML, CSS, NodeJS, and ReactJS. Analyzed user requirements, designed and implemented necessary functionalities using JavaScript.
- Collaborated with 2 developers to improve UI design and refactored existing code, reducing code duplication by modularizing code and enhancing performance by 20%. Reduced search latency by introducing indexes in database.
- Resolved software design defects and performance bottlenecks by analyzing log files, debugging code, and applying effective troubleshooting techniques, ensuring smooth operation of software applications.

PROJECTS

Encryption and Decryption algorithms **Dec, 2022 – Jan, 2023**

- Developed a Python program to perform cryptographic operations using AES, RSA, DSA, and SHA algorithms and measured run-times for small (1KB) and large (10MB) files. Conducted thorough testing, including verifying correctness of code by decrypting ciphertexts to retrieve original data and validating signatures for signed messages.

Raft leader election and log consensus **Dec, 2022 – Jan, 2023**

- Built a fault tolerant key-value storage system by implementing leader election feature of Raft for replicated state machines. Deployed log consensus feature of Raft to maintain consistent replicated log of operations.Used Extended Raft paper to design system and implemented it in Go.

Database and Query optimisation for online shopping analysis **Nov, 2022 – Dec, 2022**

- Designed a complete PostgreSQL database for an online seller. Utilized Python faker library and Java to generate synthetic data containing 1 million tuples. Normalized database by decomposing it into BCNF. Wrote 15 SQL queries and optimized them to improve run-time and space requirements. Used indexing to enhance search-based query performance.

Distributed Snapshots **Oct, 2022 – Nov, 2022**

- Implemented Chandy-Lamport algorithm for determining global state of a distributed system using GoLang. Captured local snapshots of individual processes and generated global snapshot. Any process can initiate snapshot process and ensured it doesn't interfere with normal execution of processes. Used SyncMap for concurrent read-write operations.