UTKARSH HARSH
SOFTWARE ENGINEER

CONTACT

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EDUCATION

- **Indian Institute of Technology, Delhi:** B.Tech. in Chemical Engineering | 2019-2023

TECHNICAL SKILLS

- **Languages:** Java, C++, Python, Go, JavaScript, SQL, Dart, HTML, CSS

- **Frameworks & Libraries:** Spring Boot, FastAPI, React, Express.js, Flutter

- **Databases:** PostgreSQL, MongoDB, OpenSearch (ElasticSearch), MySQL

- **DevOps & Tools:** Docker, Kubernetes, Git, Kafka, Logstash, Vector

- **Data Science:** Machine Learning (TensorFlow, Keras, Scikit-learn), JSON Processing

ACHIEVEMENTS

- **A* Rating for Exceptional Performance (2023-24):** Recognized for significant contributions to backend architecture and data-driven solutions

COURSES

- **Cloud & DevOps:** Advanced Kubernetes, Kubernetes Fundamentals, Container Orchestration

- **Machine Learning:** Advanced Algorithms, Supervised and Unsupervised Learning

- **Web Development:** Node/Express, React, HTML/CSS/JavaScript

- **Mobile Development:** Flutter

- **Computer Science:** Advanced Data Structures and Algorithms

PROFESSIONAL EXPERIENCE

JIO PLATFORM LIMITED | SOFTWARE ENGINEER
August 2023 - Present

- Architected and developed a robust **SIEM service** backend using **Spring Boot**, **OpenSearch**, and **Kafka**, enabling real-time security monitoring and threat detection
- Engineered high-performance **log ingestion pipelines** processing millions of events daily with optimized **data structures** and **algorithms**
- Implemented comprehensive **log archival** and **retention system** supporting **blob** and **S3 storage**, reducing operational costs by 30%
- Designed **RESTful APIs** for configurable **alerting** based on user-defined filters, improving threat detection accuracy by 40%

JIO PLATFORM LIMITED | BACKEND DEVELOPER
August 2023 - January 2024

- Created a **cloud service comparator** tool using **Python/FastAPI** to evaluate configurations across **GCP**, **AWS**, and **Azure**, enabling data-driven infrastructure decisions
- Engineered efficient **data processing pipelines** for complex **JSON** datasets, implementing advanced **transformation algorithms**
- Implemented **fuzzy search** capabilities in **MongoDB**, achieving 95% accuracy in matching similar configurations
- Optimized **API** response times by 60% through database **query refinement** and **caching** strategies

SUCCESS NUMBERS | APP DEVELOPER INTERN
July 2022

- Developed a cross-platform **warehouse management** application using **Flutter** and **Dart**, reducing inventory processing time, integrated **barcode scanning** functionality to automate product identification, decreasing manual errors
- Designed and implemented a **MySQL** database schema optimized for inventory transactions and reporting

PROJECTS

ORGANIZATIONAL HIERARCHY SYSTEM | MAR 2022

- Designed and implemented a scalable **organizational hierarchy** management system with dynamic employee indexing
- Optimized data retrieval operations using **AVL trees**, achieving **O(log n)** lookup complexity for 10,000+ employee records

HIGH-PERFORMANCE LRU CACHE | DEC 2021

- Engineered an efficient **LRU cache** implementation using a **doubly linked list** and **hash map**, achieving **O(1)** access time
- Optimized memory usage while maintaining constant-time operations for all cache operations

RESTAURANT QUEUE SIMULATION | APR 2022

- Developed a discrete event simulation model for restaurant operations using advanced **data structures**
- Implemented **min-heap priority queue** for efficient event scheduling, providing insights for optimizing customer wait times