

VIKAS KUMAR

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EDUCATION

DELHI TECHNOLOGICAL UNIVERSITY

B.TECH IN ELECTRICAL
ENGINEERING
May 2021 | New Delhi, IN

COURSEWORK

UNDERGRADUATE

Data Structures and Algorithms
Object Oriented Programming
Computer Networks
Operating Systems
Database Management Systems
Cloud Computing
Linear Algebra and Probability
Numerical Optimization Methods

SKILLS

Programming Languages:

- C/C++ • Java (Core + OOP)
- JavaScript (ES6+) / TypeScript

Backend Technologies:

- Node.js & Express.js
- Spring & Spring Boot
- WebSockets & Socket.IO
- JWT Authentication
- RESTful API Design

Database Management:

- PostgreSQL • MongoDB
- Redis (Caching & Session Store)
- Query Optimization • Indexing
- Sharding • Partitioning
- Replication • Backup & Restore

Cloud & Infrastructure:

- Amazon Web Service (AWS)
- Google Cloud Platform (GCP)
- Jenkins • CI/CD Pipelines
- Git • GitHub

Frontend Technologies:

- HTML5 & CSS3
- React.js & React Native
- State Management
- Asynchronous Requests

Testing Frameworks:

- UI Testing with Selenium
- Load Testing with K6 & JMeter
- Unit Testing with Jest & JUnit
- API Documenting & Testing with Swagger, OpenAPI & Postman

EXPERIENCE

SAMSUNG R&D INSTITUTE - DELHI | SOFTWARE ENGINEER

Sep 2022 – Present (38+ Months) | Noida, UP, India (Full-Time)

- Optimized VXT CMS performance by improving **RESTful API** efficiency and enhancing database operations through *reduced redundant queries*, *selective data fetching*, *optimized indexing*, and *refined data models*, resulting in **30% faster** response times and higher overall throughput.
- Enhanced microservice performance by adding Redis based **caching**, solidifying **concurrency handling**, refactoring heavy workloads into **asynchronous pipelines**, delivering **30% faster** user experience under high traffic.
- **Implemented a robust media-upload pipeline** using *presigned S3 URLs*, secure *MIME & size validation*, *streamed server-side checks*, *integrity verification*, enabling faster and more resilient photo-video uploads across the VXT platform.
- Achieved a **45% faster publish cycle** with **sub-minute content delivery to 1,000+ displays** by optimizing Publisher Service logic for *scheduling*, *playlist generation*, and efficient *data handling*.
- Built complete **Activity Log system** from scratch, capturing user actions through a **queue-driven pipeline** and enabling fast lookups with **composite indexing**.
- **Reduced on-site maintenance by 40%** by building **Remote Device Management** module with *real-time alerts*, automated *health checks*, and *energy-usage insights*.
- Implemented VXT Screen Wall support, enabling **synchronized content playback** across multiple displays to create seamless multi-screen layouts.
- Achieved **35% faster partner-app onboarding** for POS and infotainment solutions by integrating PIRS Marketplace with **standardized integration templates** and *minimal-code deployment workflows*.
- Delivered a **production-grade MVP** for Samsung's AI for Education in **2 months** by building the platform with **asynchronous I/O**, a **modular service architecture**, and **RESTful APIs**. Achieved **3x faster feature integration** and **99.9% endpoint reliability** verified with *K6 load tests*.
- Secured Samsung's Professional SWC certification, **earned by only 5%**, demonstrating strong development expertise & problem-solving abilities.

Skills: C++, Java, JavaScript, Node.js, Spring Boot, React.js, SQL, AWS, GCP

THE SMART CUBE | DATA ANALYST

August 2021 – May 2022 (10 Months) | Noida, UP, India (Full-Time)

- Designed **optimized SQL queries** to efficiently extract & structure sales data, improving analyzing speed by **30%** enabling faster, more reliable decision-making.
- Automated recurring commodity-price reports by lightweight **Selenium scripts** to fetch and clean external **API data**, updating client templates with current values.

PROJECTS & PUBLICATIONS

VERSIFY GITHUB

January 2024 – June 2024 | New Delhi, India

- Built a full-stack **MERN** app for creating and sharing content, implementing robust **RESTful APIs** with **JWT authentication**, role-based authorization, enhanced security and efficient frontend-backend communication.

CONTACTLESS PARKING WITH IOT & WEB APP VIDEO | PUBLICATION

June 2020 – April 2021 | New Delhi, India

- Built a **cloud-based parking system** with real-time updates, pre-booking, auto-billing, and a **scalable backend** along with **Arduino** based image detection for **QR Code** scanning; reinforced the product through a **research paper**.