

# Sabari Karthik

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## Education

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**Thiagarajar College of Engineering**

*Tamil Nadu, India*

- B.E Mechanical Engineering

*2019-2023*

## Experience

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### **NIRA Finance**

*Software Developer (Full Stack Developer)*

- Led feature enhancements in the dashboard using Angular, optimizing bundle size by 40% , resulting in a 30% improvement in page load times.
- Enhanced data retrieval efficiency by leveraging parallel scans and batch operations, reducing query latency by 25% and improving overall database throughput for high-traffic requests.
- Optimized DynamoDB (DDB) costs by 30% through efficient data modeling, on-demand capacity, and query optimizations, while managing seamless data migration and reducing storage costs by 25%, ensuring scalability for high-traffic applications.
- Enhanced system reliability by resolving critical backend bugs and implementing robust monitoring solutions using AWS CloudWatch and CodeGuru, resulting in a 10-40% reduction in API execution time for optimized endpoints and a significant decrease in downtime.
- Leveraged expertise in AWS services such as Lambda, EC2, Athena, and CloudFront to implement scalable cloud solutions, optimizing application performance and resource efficiency.

### **ZOHO Corporation**

*Software Developer (Java Springboot)*

- Developed a data access layer for a spring boot application which improves the search capabilities of the system by using Elasticsearch thereby enhancing the retrieval time by 100%
- Executed backend development using Java and Spring Boot, incorporating advanced tools like Kafka, Redis, and FFMPEG (for comprehensive video and image processing and efficient use of resources).
- Implemented HLS (HTTP Live Streaming) for adaptive video streaming, dynamically adjusting bitrate for optimal platform performance and reduced the buffering time by 50-95% compared to single-bitrate streaming
- Integrated backend storage and CDN to optimize data management and content delivery for the application and thereby reducing the streaming time by 50-80%
- Implemented multipart upload for videos, improving the efficiency of large media file handling and increased the upload speed of media files by 20-40%, up to 90% better fault tolerance and better bandwidth utilization in multipart upload due to parallelism which resulted in 40-75% more efficient use of available bandwidth.
- Utilized third-party APIs to populate test data, employing scripting and Java for extensive testing scenarios.
- Orchestrated server testing for video processing load, including inspecting the media processing and architecture of other social media platforms.

## Projects

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### **X-Lite: Social media application (Link)**

*MERN Stack*

*ReactJS , NodeJS , MongoDB , Express , Tailwind CSS*

- Built the app using the MERN stack, Tailwind CSS and Cloudinary for managing up to 25 GB of cloud-based image assets and deployed it on Render.
- Implemented robust user authentication with JSON Web Tokens (jwt v9.0.2), which secured user sessions.
- Leveraged React Query for efficient data fetching, caching, and state management.
- Developed features including creating, deleting, and liking posts, 1-level nested comments, notifications, user interactions, profile customization, and image handling.

## Cartify: E-commerce application (Link)

Java/Springboot

- A Springboot application that allows admin to create and manage products, while users can browse and filter products by various categories thereby allowing Role Based Access Control (RBAC).
- Administrators have full control over product details, including the ability to update any field and add optional images while users have the ability to add or remove products from their cart and place orders.
- User authentication is securely handled through JSON Web Tokens (JWT), ensuring a safe experience
- Designed and implemented RESTful APIs using the MVC architecture and Spring Data JPA

## Technical Skills

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**Programming Languages:** C++, Java, JavaScript, TypeScript, HTML, CSS.

**Operating Systems:** Windows, Linux, macOS.

**Software & Tools:** AWS Services, Kafka, Redis, Elasticsearch, MySQL, Excel, FFMPEG.

**Frameworks:** Angular, ReactJS, jQuery, Spring Boot, Node.js with Express.

**Computer Science Fundamentals:** DBMS, OOP, OS, DSA.

## Positions of Responsibility

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### TCE Music Club

- Secretary of Music Club

### Mechanical Sports Secretary

- Involved in organising and hosting sports events both inter and intra-department

## Extra-Curricular Activities

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- Achieved 2nd place in Regional Piano Solo Instrumental Competition, 2014.
- Won gold medal in District-Level Badminton Tournament, 2015.
- Secured gold medal in Regional Level Badminton Tournament, 2017.
- Reached the National Finals in Musical Instrumental during the first year of college at NIT, 2019.
- Placed 2nd in Band Performance at the Yugam Music Festival, 2020.
- Won gold medal in Department-Level Badminton and represented my college at the inter-college level 2020.