RAHUL K JHA

BACKEND DEVELOPER

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About Me

With 10+ Years of experience, a passionate backend developer having expertise in developing web applications in multiple programming languages including but not limited to TypeScript, Java & PHP. Interested in Web Security, System Design, and Scaling applications to handle a large number of concurrent users & possess a good understanding of Data Structures, Object Oriented Design, RDBMS, NoSQL & Distributed Systems

Experience

Medtronic India (03/2024 - Current)
Senior Software Engineer

1. **Cloud Native Patient Management Platform**

- Architected and developed a scalable microservices-based platform leveraging both synchronous REST APIs and event-driven communication patterns
- Designed and implemented domain-driven backend services for DICOM image ingestion, case and plan lifecycle management, user identity, and audit logging
- Led the development of metadata extraction pipelines to process and store structured data from large image files in distributed systems
- Built secure user and role-based access control (RBAC) modules ensuring compliance with organizational security policies
- Implemented event-driven workflows using AWS SNS for asynchronous service orchestration and inter-service communication
- Applied reactive programming principles (RxJS) to enhance data flow control and improve system responsiveness
- Developed and optimized PostgreSQL database schemas, queries, and indexing strategies for high-throughput data operations
- Integrated Elasticsearch and Kibana for centralized logging, tracing, and performance monitoring, improving observability and fault diagnosis
- Collaborated with cross-functional teams to define API contracts, error-handling strategies, and resilient retry mechanisms
- Ensured high availability, fault tolerance, and scalability through best practices in distributed system design and cloud-native deployment on AWS

Technology: NestJS, RxJS, Typescript, Jest, GraphQl PostgreSql, Redis, OpenSearch, Logstash, Docker, K8S, DynamoDb, Kibana, AWS (Cognito, RDS, SQS, S3, SES, SNS, Bedrock, ECR, ECS, Cloudwatch)

2. **Mobile App Middleware Service**
   - Developed a GraphQL-based middleware service to aggregate and serve data from multiple backend systems to a mobile application
   - Designed schema and resolver patterns enabling flexible, efficient client queries with minimal over-fetching
   - Implemented data transformation and stitching logic to unify data from diverse REST and database sources
   - Optimized backend performance through asynchronous processing and connection pooling in Spring Boot
   - Deployed on AWS with integrated logging, monitoring, and collaboration with mobile teams for seamless integration

Technology: SpringBoot 3, Java, Junit, GraphQl, Redis, Docker, AWS Cognito, OAuth

Borzo India (09/2023 - 11/2023)
Senior Backend Developer

1. **Delivery Platform**

- Served as a pivotal individual contributor within the Finance Research and Development Team, actively engaged in the development of various features pertaining to transaction and payment processing
- Helped team in migrating multiple module's codebase and other documentation in migrating to english translation from Russian

Technology: PHP 8, Symfony, PHPUnit, MySql, Redis, ElasticSearch, Logstash, Docker, K8S, RabbitMQ, ClickHouse, Grafana

Darwinbox (03/2023 - 08/2023)
SDE - III

1. **Main Product**

- Played a pivotal role in the development of a Multi-Language Support framework, widely adopted by all modules, facilitating translation support in the user's preferred language.
- Led the development of a feature that empowered administrators to manage notification channels (Email, Mobile Push Notification, SMS, Teams, WhatsApp, Web Push Notification), allowing users to customize their notification preferences.
- Contributed significantly to resolving performance issues in the caching layer, resulting in enhanced data caching and retrieval, and ultimately improving user experience.
- Worked as a key contributor for the 7-member Payroll team, responsible for spearheading new feature development and bug fixes within the Payroll Module.

Technology: PHP 8, Symfony, NodeJS, MongoDB, MySql, Redis, ElasticSearch, Docker, K8S, RabbitMQ

ACS Solutions (04/2018 - 03/2023)
Principal Software Engineer

1. Cannabis Potency Testing web app for a US based client

- Managed a team of 7 developers to successfully develop a cutting-edge SAAS application, streamlining the cannabis potency testing process.
- Collaborated with clients to analyze and enhance project requirements, resulting in the creation of an optimized solution encompassing the desired features.
- Provided valuable support to the devops team in establishing and optimizing the necessary infrastructure for hosting and scaling the application, ensuring optimal performance for a substantial user base.
- Implemented an automated API test environment utilizing Postman, significantly reducing application testing time and enabling swift feature deployment to enhance user experience.

Technology: PHP 8, Laravel 9, VueJS, MySql, Redis, Docker, AWS, RabbitMQ

2. Business Research & Analysis Data Management App for a US based client

- Managed a team of 10 developers in the construction and expansion of a REST API for a research and analysis data management application.
- Significantly enhanced API performance, achieving a 150% improvement in average response time for both web and mobile clients.
- Implemented auto-scaling mechanisms to effectively handle sudden surges in user requests.
- Introduced optimization techniques such as caching and load balancing at the application and data layers, resulting in reduced server load, cost savings, and enhanced user experience.
- Strengthened security measures by implementing JWT-based authentication and two-factor authentication (2FA).
- Added Full-Text Search functionality from the ground up using ElasticSearch, improving the accuracy and efficiency of content search results.
- Integrated Single Sign-On feature using Azure Active Directory, streamlining the login process for enterprise users and increasing efficiency.
- Implemented user activity tracking through GA4, enabling comprehensive analysis of user behavior and generating a user-friendly dashboard for identifying areas of improvement in both web and mobile clients.
- Developed and deployed a Jenkins-based continuous deployment pipeline to streamline and automate the deployment process.

Technology: NodeJs, ExpressJS, VueJS, Java, MySql, Redis, RabbitMQ, Google BigQuery, ElasticSearch, Docker, K8S, AWS

3. E-Commerce Application for a US based medical organisation

- Enhanced the application by implementing a fallback payment gateway integration for improved functionality.
- Implemented effective scaling strategies to accommodate a monthly traffic of 3 million visitors.
- Successfully migrated the on-premise application hosting to a cloud-based infrastructure.
- Established a Kubernetes cluster and Docker-based hosting environment, enabling automated scaling based on user traffic and system load.
- Drove a significant improvement of 500% in page load time by effectively leveraging Fastly, a robust technology that harnesses Varnish as a reverse cache and HTTP Accelerator. Moreover, successfully implemented various security enhancements to optimize user experience and fortify the protection of sensitive data.

Technology: PHP 7, Laravel 8, JavaScript, MySql, Redis, RabbitMQ, Fastly, ElasticSearch, Docker, K8S

Meltag Inc (01/2017 - 03/2018)
Senior Software Engineer

1. Campaign & Loyalty Management Application

- Developed the REST API for a Campaign Management Application for Web, Mobile & SMS based interface
- Decreased the Infrastructure cost by 20% by implementing various application and infrastructure level improvements
- Improved API response time by 30% by implementing various code improvements

Technology: PHP 7, Laravel 5.5, VueJS, MySql, Redis, AWS SQS

Tattvam Media (06/2015 - 12/2016)
Software Engineer

1. Digital Media Marketing Engagement Analytics Application

- Led a team of 4 developers to build and scale an in-house application from scratch to manage and track digital media marketing conversion rate by pulling in data from various sources like Google Adwords & Facebook Marketing & created a dashboard for actionable insights
- Understood the requirements of the marketing team and worked on developing an optimized solution for new features
- Setup & manage cloud based hosting environment

Technology: PHP 7, VueJS MySql, Redis, AWS

Open Source Contributions

Sentry Integration For Magento
Added New Feature

- Added a new feature that has let users enable or disable the integration on demand
  Pull Request Link: https://github.com/justbetter/magento2-sentry/pull/59

- Fixed a very critical bug for Native Azure Mailer Bridge for Symfony Framework
  Pull Request Link: https://github.com/symfony/symfony/pull/53388

Hackathon (2019)

Dobby Chat Bot
A Chat Bot for newly joined employees

- Developed a Teams bot that can answer the question regarding the organization's structure, people & process for newly joined employees. Technology included Python & Google Dialogflow

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Area of interest
- Web Security
- REST API Design
- Distributed Computing

Education

2015

RTU Kota

BTech in Computer Science & Engineering

Certification

Programming with Google Go

Coursera

- A Golang course taught by Ian Harris (University of California Irvine)
  Certification Link: https://coursera.org/verify/specialization/EKYKE8T3QKFL

Technology & Expertise

TypeScript

Java

PHP 8

Golang

RDBMS

AWS

Docker & K8S

MongoDB

Web Presense

Github
https://github.com/t9toqwerty

Website
https://rahulkjha.com

Linkedin
https://www.linkedin.com/in/t9toqwerty/

Stackoverflow
https://stackoverflow.com/users/2668465/