

NIKHIL TIWARI

Lead Software Engineer

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NT

EXPERIENCE

Skill Development

SELF EMPLOYED

01/2025 - 01/1970 Delhi, Delhi

Self-development in data structures, algorithms, and AI/ML

- Focused on Data Structures & Algorithms (DSA) and AI/ML to strengthen foundational knowledge and problem-solving skills
- Exploring AI/ML concepts, including supervised and unsupervised learning, neural networks, and natural language processing (NLP)
- Working on personal projects to apply AI/ML techniques in real-world scenarios

Lead Software Engineer

OPTUM (UHG)

10/2020 - 12/2024 Gurugram, Haryana

Health Services Company

- Reduced MySQL query load times from 2 seconds to 200-500ms, improving system efficiency by 1.5x and lowering RDS CPU utilization from 70% to 50%
- Migrated non-lag-sensitive queries from product DB to replica DB, reducing query execution time
- Reduced ElastiCache CPU utilization by identifying and resolving duplicate event publishing
- Designed and implemented a high-performance archival service, reducing database load and improving application latency
- Developed a Golang-based microservice using AWS SQS and EventBridge, replacing HTTP-based systems and reducing operational costs
- Designed and implemented a horizontal cache management system (CSM), reducing stale cache issues and improving system performance
- Developed a PHP-based consumer layer from scratch as part of an ETL pipeline redesign, reducing processing time from 7 hours to 2 hours—a 71% improvement
- Mentored junior developers, conducted code reviews, and set coding standards, improving team productivity and code quality
- Conducted training sessions on caching strategies and created detailed documentation for microservices
- Implemented OpenTelemetry (OTEL) instrumentation and created dashboards for real-time monitoring, enabling proactive issue detection and resolution
- Integrated alerting mechanisms into the baseline framework, ensuring 100% error log capture and aggregation in production
- Worked with DevOps to migrate from EC2 to EKS, optimize CI/CD pipelines, and reduce infrastructure costs
- Collaborated with QA teams to achieve >90% code coverage through unit and integration tests
- Addressed Dependabot issues and performed PII/PHI compliance checks, enhancing application security
- Received multiple performance awards for dedication, collaboration, and delivering high-quality solutions on time

SUMMARY

I am a results-driven Senior Software Engineer with over 7 years of experience specializing in backend development, scalable architecture, and system optimization. My expertise spans across various technologies including PHP, Java, Python, and cloud platforms like AWS. I have a strong track record in improving system performance, reducing operational costs, and mentoring teams to achieve technical excellence

EDUCATION

Bachelor of Computer Application (BCA)

APS UNIVERSITY

01/2014 - 01/2017 Satna, MP

KEY ACHIEVEMENTS



Horizontal Cache Management System

Designed and developed a horizontal cache management system (CSM), reducing stale cache issues and improving system performance



Data Archival Framework

Implemented a data archival framework, improving query performance and reducing database load. Archived data can now be queried through AWS Athena



Config-Based Rule Manager Framework

Developed a config-based rule manager framework, enabling dynamic rule processing and improving system adaptability



EC2 to EKS Migration

Migrated services from EC2 to EKS, reducing infrastructure costs and improving resource utilization



Agile Leadership

Facilitated daily scrum meetings, sprint planning, and retrospectives, ensuring timely delivery of features

EXPERIENCE

Software Engineer

NOTIFYVISITORS

📅 02/2019 - 01/2020 📍 Delhi, Delhi

Marketing Company

- Led the development of Progressive Web Applications (PWA) and Trusted Web Activities (TWA), automating APK generation and improving deployment efficiency
- Built a Kafka-based Pub-Sub system for large-scale analytics, enabling efficient streaming of user session and heatmap data
- Developed a custom wrapper for Google Workbox, enhancing client-side caching and improving application performance
- Designed and implemented a rate-limiting system to manage API traffic and prevent abuse

Junior Software Developer

BIGLY TECHNOLOGIES

📅 11/2017 - 06/2018 📍 Noida, UP

E-Commerce Company

- Designed and tested RESTful APIs to enhance backend functionality and data integration
- Transitioned from Core PHP to Laravel, improving code maintainability and scalability
- Utilized PHP, MySQL, HTML, CSS, and JavaScript for full-stack development

SKILLS

Apache JMeter

Athena

AWS

AWS Lambda

Caching

CloudWatch

Core PHP

CSS

Data Structures

Docker

EC2

ELK Stack

ETL

GitHub

Golang

HTML

IAC

Instrumentation

Java

Java Spring

JavaScript

Kafka

Kubernetes

Laravel

MongoDB

NLP

PHP

PWA

Python

RDS

Redis

REST

S3

Scrum

Serverless

SNS

Splunk

SpringBoot

SQL

SQS