Parag Shah

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SUMMARY

Software Engineer with 3 years of experience architecting scalable, customer-centric full-stack applications. Proven expertise in cloud-native microservices, GenAI integrations, CI/CD pipelines, and delivering secure production-grade solutions.

EDUCATION

Master of Computer Science & Engineering in AI *May 2025*
State University of New York at Buffalo *3.96/4.0 GPA*
Assistantship: Teaching Assistant for subjects Theory of Computation and Analysis of Algorithms.

Bachelor of Computer Science & Engineering *Sep 2020*
Rajiv Gandhi Proudyogiki Vishwavidyalaya *3.5/4.0 GPA*
Publication: Titled "Text Preprocessing & Comparative Study of Cosine Similarity & TF-IDF", published in the IJSREM Journal.

PROFESSIONAL EXPERIENCE

Best Practical Solutions | Buffalo, NY
Software Engineer Intern *Aug 2024 – Dec 2024*

- Built a GenAI extension for 6 tasks and ticket management workflows in Request Tracker and integrated **LLMs** (GPT, Llama) with configurable model selection, saving over **15 hours** in resolution time weekly.
- Strengthened priority ticket handling by implementing sentiment analysis and summarization, expediting resolution time by **50%**.
- Expanded language support to **18+** countries by integrating multilingual autocomplete and AI-driven response suggestions.

Tata Consultancy Services | India
Software Engineer II *Mar 2022 – Dec 2023*

- Led two projects at Moody's Analytics, implementing Credit Monitoring and an AI-powered Financial Spreading system for risk analysis and loan processing, benefiting over 400,000 end customers across 5+ banking clients.
- Engineered a full-stack web platform for Portfolio Management and Credit Analysis, shipping 10 production releases.
- Collaborated with cross-functional teams to develop an AI-powered financial spreading tool, achieving 95% accuracy using **NLP**.
- Designed data models for **10 M+** financial trend records and integrated **Sisense dashboards**, enhancing business insights by **45%**.
- Conducted peer code reviews, root cause analysis, and maintained technical documentation, reducing onboarding time by **60%**.
- Employed test-driven development, achieving **80%** unit-test coverage and reducing bugs by **3x** using integration testing.
- Administered **DevOps** using Docker, AWS, and GitHub Actions across four environments (Dev, CI, UAT, Prod).

Software Engineer *Sep 2020 – Feb 2022*

- Partnered with product and QA teams at TTB Bank to launch a customer-centric banking app with E-KYC, payment, and investment workflows, enhanced user experience **5x**, and increased customer acquisitions by **30%**.
- Improved component reusability by 2x through developing **20+** core UI/UX components, reducing developer effort by **50%.**
- Revamped the backend by migrating a legacy application to a modern architecture with embedded **GraphQL** and **RESTful APIs**, reduced response time by 55%, and improved SEO by **35%** through server-side rendering.

SKILLS

Programming: Java, Python, TypeScript, JavaScript, HTML, SCSS/CSS.
Frameworks: Spring Boot, Hibernate, Junit, Mockito, Angular13+, RxJs.
Deployment & Tools: Git, Docker, Jenkins, CI/CD, AWS (EC2, Lambda, S3, RDS), Shell, Jira, Okta.
Databases: SQL (PostgreSQL, Oracle), NoSQL (MongoDB, DynamoDB), Redis.
Relevant Coursework: Data Structures and Algorithms, OOPs, Machine Learning, Deep Learning (GenAI), Cloud Computing.

ENGINEERING PROJECTS

E-commerce Web Application – Simulating High-traffic Scalable Microservices Architecture *Jan 2025*

- Architected a Java app with a **Nginx**-based API gateway, rate limiting, and **Redis** caching, achieving 5ms response latency.
- Implemented Okta OAuth authorization server and JWT authentication, enabling SSO and reducing 99% of unauthorized API calls.
- Streamlined CI/CD pipelines with Jenkins, reducing deployment time by **40%** and ensuring code quality with **SonarQube**.

Advertisement Recommendation Engine – AI-powered personalized system *Jun 2024*

- Developed an ad recommendation web platform leveraging users' social media activity using deep learning algorithms such as DenseNet, ResNet50, and trained on a 100K+ MIT image dataset, achieving 90% accuracy.
- Performed batch normalization, pooling, model pruning, and hyperparameter tuning, improving model accuracy by **30%.**

Custom ORM Framework – Hibernate Inspired *Jul 2023*

- Built a custom ORM framework to simplify database interaction for Java developers, featuring annotation-based entity mapping, SQL generation, and configurable connections, eliminating 90% of repetitive boilerplate code.
- Designed a low-level validation system with 10+ custom validators to enforce schema constraints, minimizing runtime errors.