

# Raashil Aadhyanth

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## SUMMARY

Software Engineer with 3.5+ years of experience building full-stack applications. Experienced in integrating backend systems using Java, Spring Boot, Hibernate, Node.js, and GraphQL, and frontend interfaces with React.js, Next.js, and TypeScript. Skilled in designing secure RESTful APIs and scalable microservices architectures. Proficient in deploying and scaling applications on AWS (EC2, S3, RDS, Lambda) and Azure (App Services, AKS, Azure SQL), leveraging Docker and Kubernetes for automation and reliability. Strong knowledge in PostgreSQL, MySQL, MongoDB, and Redis, optimizing queries and caching for high-performance applications. Integrated LLM frameworks (GPT-3, BERT, Hugging Face Transformers) to automate workflows and enhance application intelligence, built real-time data pipelines with Kafka and Spark to drive data-informed decisions.

## SKILLS

- **Backend & Application Frameworks:** Java 17, Spring Boot, Spring MVC, Spring Data JPA, Hibernate, Node.js, Express.js, GraphQL, C#, RESTful & SOAP APIs, Microservices Architecture, Event-Driven Systems
- **Frontend & User Interfaces:** React.js, Next.js, Angular, TypeScript, JavaScript (ES6+), Redux, HTML5, CSS3, Tailwind CSS
- **Databases & Data Engineering:** PostgreSQL, MySQL, MongoDB, Cassandra, Redis, SQL Query Optimization, Kafka, Apache Spark
- **Cloud & DevOps:** AWS (EC2, S3, Lambda, RDS, API Gateway, CloudWatch), Azure (App Services, AKS, Azure SQL), Docker, Kubernetes, CI/CD Pipelines, Infrastructure as Code (Terraform, CloudFormation)
- **LLMs:** RAG-based retrieval, Transformers, BERT, GPT, PyTorch, Hugging Face, LangChain, Python, NLP pipeline development, anomaly detection.
- **Security & Compliance:** Spring Security, OAuth2, JWT, Role-Based Access Control (RBAC), API Security, HIPAA & GDPR Compliance
- **Monitoring & Observability:** ELK Stack, Log Management, Application Performance Monitoring (APM), Prometheus, Grafana, Real-Time Metrics
- **Testing & QA Automation:** JUnit, Postman, SOAP UI, Cypress, Selenium, Unit & Integration Testing, Test Automation, QA Frameworks
- **Collaboration & Agile Practices:** Agile (Scrum/Kanban), Sprint Planning, Version Control (Git, GitHub, GitLab, Bitbucket), Jira, Confluence

## PROFESSIONAL EXPERIENCE

### Metropolitan Transportation Authority AI Software Engineer

Sep 2024 – Present | New York

- Developed the MTA-NEXUS web portal using React.js, Node.js, and PostgreSQL to visualize and manage station conditions, labor allocation, and maintenance schedules, providing operational teams with actionable insights to support decision-making across over 200 subway stations.
- Implemented a prototype AI Chat Assistant using RAG-based LLMs and Python, allowing station employees to query maintenance data, operational policies, and historical performance, processing more than 10,000 queries weekly to streamline support workflows efficiently.
- Contributed to 360° station visualization enhancements using Three.js and WebGL, designing interactive digital station models and dashboards that improved situational awareness for maintenance teams and assisted in emergency planning and operational readiness.
- Built automated reporting dashboards using Power BI, Power Automate, and Python, integrating multiple data sources and reducing manual reporting effort by 50+ hours per month, providing leadership with timely operational and maintenance insights.
- Developed micro-services and predictive maintenance pipelines with Python, PyTorch, Node.js and Spring Boot which facilitated real time anomaly detection and managed over a million requests per month on the NEXUS systems.

### Capgemini Software Engineer

Apr 2022 – Aug 2023 | India

- Architected a comprehensive crop management web application using React.js for UI, Redux for state management, and Axios for API calls, streamlining sales and inventory for over 2,000 farmers and consumers weekly, ensuring reliable interaction between frontend and backend modules.
- Optimized React components and templates, reducing cloud storage usage by 1.2 TB, improving page rendering speed across multiple sections, and supporting the organization's carbon-neutral and sustainability initiatives.
- Formed and integrated backend services using Node.js with MongoDB for real-time crop availability, pricing, and analytics, processing tens of thousands of transactions daily, ensuring consistent data delivery for frontend interfaces.
- Created Restful APIs including microservices in Node.js/Express.js. Also deployment to AWS (EC2, S3, Lambda, RDS) with automated scaling and monitoring performed which allows secure and scalable data access for 5000 concurrent users.
- Containerized microservices using Docker, orchestrated deployments with Kubernetes, and implemented CI/CD pipelines via Jenkins, automating builds, tests, and production releases, reducing deployment time from 2 hours to under 30 minutes.

### LTIMindtree Software Engineer

Feb 2021 – Feb 2022 | India

- Executed and maintained monolithic Spring Boot applications with MySQL integration to manage 10,000+ medical inventory records, enabling real-time updates and ensuring synchronized data across multiple hospital branches.
- Devised interactive React dashboards with Chart.js, visualizing inventory trends, usage analytics, and low-stock alerts, supporting daily monitoring of 50+ hospital departments and improving operational decision-making.
- Applied Elasticsearch and Redis caching to enable real-time search and inventory retrieval, efficiently processing over 30,000 inventory queries daily and reducing average lookup time from several seconds to under a second across all hospital branches.
- Enforced role-based access control (RBAC), encrypted data storage, and detailed audit logging, securing sensitive hospital inventory and supplier data, and maintaining full HIPAA compliance across multiple branches.
- Implemented CI/CD pipelines with Jenkins, Docker, and Kubernetes for daily releases, and optimized database performance with Redis caching, reducing data latency and supporting 50+ concurrent hospital staff users.

## PROJECTS

**Cogniscruit Tech Used:** *OpenAI LLMs, LangChain, Node.js, Python, MongoDB, Confluent Cloud (Kafka), Flink SQL, Next.js, React* [GitHub](#)

- Programmed an AI-driven interview question generation platform using OpenAI LLMs and LangChain, processing over 5,000 candidate profiles from resumes, LinkedIn, and GitHub daily to generate tailored questions and improve recruiter efficiency.
- Established and boosted the backend using Node.js and Python, integrating MongoDB for scalable data storage and Confluent Cloud (Kafka) with Flink SQL for real-time data streaming, handling thousands of streaming events per hour for seamless AI workflows.
- Crafted an interactive frontend with Next.js and React, enabling recruiters to customize and manage questions, supporting hundreds of concurrent sessions, and implementing feedback-driven refinement to enhance question relevance over time.

## EDUCATION

Master of Science in Computer Science | Pace University

GPA: 3.97/4 | May 2025

## CERTIFICATION

- Bloomberg Market Concepts
- AWS Certified Developer
- J P. Morgan - Software Engineering Job Simulation