

# Sagar Barate

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## Education

<b>Masters of Science in Software Design with Cloud Native Computing,</b> Technological University of Shannon (AIT) – Athlone, Ireland	Sept 2024 – Aug 2025
Grade: First Class Distinction Course Modules: Cloud Computing, Java, Python, Microservices, DevOps, CICD, Agile Methodology, Docker, Kubernetes, Ansible, Terraform.	
<b>Bachelor's of Engineering in Mechanical Engineering,</b> Lokmanya Tilak College of Engineering – Mumbai University, India Grade: 8.33 CGPA	Jul 2018 – Jun 2021

## Experience

Application Development Analyst, Accenture Pvt Ltd – Mumbai, India	Aug 2022 – Aug 2024
• Developed scalable backend services using Java, Spring Boot, REST APIs, SQL, and microservice design patterns for a banking system and a learning platform project.	
• Built reusable UI components and full-scale features using React, Typescript, JavaScript, HTML, and CSS, improving usability and ensuring seamless integration with backend services.	
• Designed and deployed Python and Django-based microservices for authentication and course recommendation workflows, containerizing them with Docker and deploying on AWS EC2.	
• Implemented CI/CD pipelines using Jenkins and GitLab CI to automate builds, tests, security scans, and deployment of Spring Boot and React services.	
• Optimized SQL queries, reduced backend latency, and introduced caching mechanisms to enhance performance in high-traffic banking modules.	
• Used AWS services including EC2, S3, RDS, EKS, IAM, and VPC to deploy and manage cloud-native applications using Docker, Kubernetes, and Terraform.	
• Improved system observability using ELK Stack and OpenTelemetry, adding distributed tracing and structured logging for production debugging.	
• Collaborated closely with architects and product teams to refine API contracts, improve microservice boundaries, and enhance system scalability.	
• Wrote Python automation scripts for log analysis, testing tasks, and monitoring workflows, reducing manual engineering effort.	
• Participated in Agile ceremonies including sprint planning, code reviews, backlog refinement, and production triage for critical features.	
Application Development Associate, Accenture Pvt Ltd – Mumbai, India	Oct 2021 – Aug 2022
• Delivered end-to-end features using Java, Spring Boot, React, Angular, Typescript, HTML, CSS, and REST APIs for banking workflows and student activity modules.	
• Built modular UI components and integrated them with backend microservices to support dashboards and transaction-related features.	
• Containerized backend and frontend services using Docker and deployed them on Kubernetes with rolling updates, service discovery, and load balancing.	
• Worked with AWS services including EC2, S3, DynamoDB, and RDS, using Terraform to maintain version-controlled and reproducible cloud infrastructure.	
• Performed debugging, server-side troubleshooting, and performance tuning to enhance reliability and reduce defect rates across production environments.	

- Collaborated in Agile environments through sprint planning, daily standups, and cross-team communication while contributing

## Projects

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### CleanNFT ([live](#))

- Developed blockchain-based recycling reward system with mobile app, admin portal, and IoT integration.
- Built with React Native, Node.js, Solidity smart contracts, and AWS Lambda.
- Users scan QR codes to earn NFT badges; admins manage users and track recycling statistics.

### Opentelemetry DevOps Project ([GitHub](#))

- Deployed microservices-based e-commerce application on AWS with 15+ services (frontend, payment, inventory, fraud detection).
- Established CI/CD pipelines with GitHub Actions for automated testing and deployment.
- Designed scalable cloud-native architecture using Kubernetes and Docker with service discovery, load balancing, and fault tolerance (Go, Node.js, Python, C#, Java, Rust).

### Microservice CI/CD Pipeline ([github.com/sagarbarate/microservice-ci-cd](https://github.com/sagarbarate/microservice-ci-cd))

- Implemented Jenkins CI/CD pipeline on AWS EC2 for shipment-service microservice, automating GitHub checkout, Maven build/test, SonarQube scans, and artifact archiving.
- Provisioned and deployed service to EC2 using Ansible playbooks for idempotent Java installation and application startup.

## Skills

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**Programming Skills:** Java, Python, JavaScript, Typescript, SQL, HTML, CSS

**Frameworks/Libraries:** Spring Boot, ReactJS (v18), Django, Tailwind CSS

**DevOps Tools:** Docker, Kubernetes, Jenkins, Terraform, Ansible, AWS (EC2, S3, DynamoDB, SDK), Git, ELK Stack, Gitlab, NPM

**Other Tools:** Postman, Redis, Kafka, Hibernate, Maven, JaCoCo, SonarQube, OpenLayers

**Key Competencies:** Data structures and algorithms, Microservices, CI/CD, ETL, REST APIs, container orchestration, performance optimization

## Certifications

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- DevOps on AWS, Cloud Technical Essentials, Code, Build, Test, Release, and Deploy ([link](#))
- Cloud Native Development with OpenShift and Kubernetes (RedHat) ([link](#))
- AWS Skill Builder: Amazon Connect – Infrastructure as Code, AWS Application Migration Service ([link](#))
- Full Stack Development (MERN Stack) Course by Coding Ninjas ([link](#))
- Machine learning for remote sensing data classification (ISRO, Indian Space Research Organization) ([link](#))

## Leadership, Achievements & Extracurricular Activities

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- Completed internships and industry training programs with leading institutions including Tata Power and Royal Enfield, gaining practical exposure to large-scale engineering and operational systems.
- Served as Global Ambassador at Technological University of the Shannon, leading cross-functional student engagement and representing at technical conferences.
- Participated in the design and manufacturing of an F1 racing car prototype for a national-level competition and led the team to a winning position, demonstrating innovation, teamwork, and technical excellence.