

# MALAV GAJERA

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## Education

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### Northeastern University

Boston, MA

Master of Science in Computer Software Engineering, GPA: 3.9

Sept 2024 – Aug 2026

- **Relevant Coursework:** Object-Oriented Design, Data Structures and Algorithms, Cloud Computing, High-Performance Parallel ML & AI, Generative AI

### Nirma University

Ahmedabad, Gujarat

Bachelors of Technology in Computer Science and Engineering

Oct 2020 – May 2024

## Technical Skills

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**Languages:** Python, TypeScript, JavaScript (ES6+), Java, C#, SQL, C/C++, Bash

**Backend & Frameworks:** Django, FastAPI, Spring Boot, ASP.NET Core, Entity Framework, RESTful APIs,

Microservices, JWT/OAuth2, Pydantic, Celery, Hibernate, RabbitMQ, Message Queues

**Frontend:** React, Next.js, HTML5, CSS3, Tailwind CSS, Responsive Design

**Databases:** PostgreSQL, MySQL, MongoDB, Redis, Query Optimization, Indexing Strategies

**Cloud & DevOps:** AWS (EC2, S3, RDS, Lambda, CloudWatch, IAM, VPC, ELB, ECS Fargate, ElastiCache, SQS), Docker,

Docker Compose, Terraform, GitHub Actions, CI/CD, Azure DevOps

**Monitoring & Observability:** Prometheus, Grafana, Structured Logging, Distributed Tracing

**Testing & Tools:** Pytest, Jest, xUnit, Mockito, Playwright, Postman, Swagger/OpenAPI, Git, JIRA, Agile/Scrum

## Experience

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### Crewasis

New York, USA

Software Engineer Co-op

Jan 2026 – present

- Accelerated API response times by **35%** and cut database load by **30%** through **PostgreSQL** query profiling (index tuning, ORM batching) and **Redis** caching layer, sustaining sub-200ms responses under peak traffic for **5K+ monthly active users**
- Reduced release cycle duration by **40%** by containerizing services with **Docker** and orchestrating end-to-end **CI/CD** automation in **GitHub Actions**; provisioned **AWS** infrastructure (EC2, RDS, S3, Lambda) enabling zero-downtime rollouts across staging and production environments
- Engineered production backend services in **Python (Django)** and **React**, designing JWT-authenticated **REST APIs** with input validation and structured error handling; maintained **90%+ test coverage (Pytest/Jest)** across weekly shipments

### Tatvasoft

Ahmedabad, Gujarat

Software Developer Intern

Jan – May 2024

- Developed **110+ RESTful API** endpoints across 8+ domain modules using **C#/ASP.NET Core** and **Entity Framework**, supporting 100+ concurrent users with sub-500ms latency through async controller patterns and service-layer architecture
- Boosted database throughput by **30%** via **PostgreSQL** query tuning, composite indexing strategies, and **Repository Pattern** refactoring of ORM interactions
- Automated **CI/CD** workflows in **Azure DevOps** and strengthened test reliability with **xUnit**-based unit and integration suites, cutting production defects by **20%** and bolstering release confidence across sprint cycles

## Projects

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### DISTRIBUTED TASK QUEUE

- Engineered production-grade distributed task queue processing asynchronous workloads (image transformation, PDF rendering, webhook dispatch) through **FastAPI**, **Celery**, and **RabbitMQ**, implementing exponential-backoff retry logic with dead-letter routing that achieved zero message loss across **10K+ queued jobs**
- Architected resilience layer with sliding-window **rate limiting**, **Redis-backed circuit breakers**, and idempotency-key deduplication — eliminated **100%** duplicate executions while sustaining **sub-50ms** API latency under concurrent load
- Provisioned **Prometheus/Grafana** observability stack with correlation-ID tracing; containerized **8 microservices** via **Docker Compose** and codified AWS infrastructure (**ECS Fargate**, **RDS**, **ElastiCache**) using **Terraform IaC**

### RESILIENT CLOUD DEPLOYMENT PLATFORM

- Architected fault-tolerant **AWS** infrastructure handling 10K+ daily requests using **EC2**, **RDS**, **S3**, **Lambda**, and **SNS/SQS** with **Terraform IaC**; enforced **multi-AZ** distribution and **VPC** segmentation for high availability
- Streamlined **FastAPI** backend delivery with **Docker** containerization and **GitHub Actions** CI/CD, enabling blue-green rollouts with continuous health checks and **CloudWatch** observability
- Provisioned auto-scaling architecture via **Elastic Load Balancer** with **IAM**-based access controls, ensuring secure service-to-service communication and **99.9% uptime** under variable traffic loads

### FULL-STACK TRANSPORTATION PLATFORM

- Built **microservices** backend using **Java Spring Boot** with **30+ REST APIs** secured via **JWT** and **RBAC**, achieving sub-200ms response times through connection pooling and query tuning
- Modeled **PostgreSQL** schema with caching strategies to handle concurrent ride-booking workflows, strengthening transactional consistency and reducing request overhead by **25%** under concurrent booking loads
- Integrated **NLP**-driven support triaging module in **Python**, reducing manual ticket volume by **40%** and accelerating customer resolution through sentiment analysis and automated priority routing