

# Dishank Oza

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## EDUCATION

### Santa Clara University

#### Master of Science in Computer Science and Engineering (GPA - 4.0/4.0)

Santa Clara, USA

Sept 2024 - June 2026

- Relevant coursework: Object Oriented Analysis, Design and Programming, Database Systems.

### University of Mumbai

#### Bachelor of Engineering in Computer Engineering (GPA - 3.5/4.0)

Mumbai, India

Aug 2017 - June 2021

- Relevant coursework: Data Structures, Advanced Algorithms, Distributed Computing, Machine Learning.
- Final Year Project: Gesture-Based Interaction System (Published in Springer: [Publication link](#))
- Member of Team Vaayushastra, ranked 9th globally and 2nd in the Asia-Pacific region in the SAE Aero Design Competition 2020.

## PROGRAMMING SKILLS

- **Certifications:** [AWS Certified Developer Associate](#), Scrum Alliance-Scrum Foundations, Discovering Backend Bottlenecks
- **Frameworks & Libraries:** React, Nextjs, Tailwind, Spring Boot, Protocol Buffers, GraphQL, NodeJS
- **Languages & Database:** Java, TypeScript, JavaScript, Python, C/C++, SQL, MongoDB, Neo4j, Redis
- **Tools & Others:** Amazon Web Services (AWS), Firebase, Terraform, Docker, Kubernetes/EKS, Jenkins, Jest

## EXPERIENCE

### Research Assistant

Oct 2024 - Present

#### [Frugal Innovation Hub Lab @ SCU](#)

Santa Clara, USA

- Restructured the database to support dynamic project phases with templates and developed APIs for efficient management. Integrated document upload and retrieval using **MongoDB GridFS** and **Next.js** for a university project management app.

### Senior Software Engineer

May 2023 - Aug 2024

#### [Freespace](#)

Mumbai, India

- Led a team of 4 in agile development, engineering business-critical features, overseeing development, and release of product features; recognized as **Freespace Captain** for exemplary leadership and problem-solving.
- Architected and developed a microservice to streamline booking events using **AWS DMS CDC**, **Kinesis**, and **EventBridge** to distribute event generation from **30 to 1 events per user daily**, optimizing resource usage and system efficiency.
- Revamped API transaction handling by replacing serialized locks with **Redis distributed locks** in a **Spring Boot** application, reducing database load and improving concurrency, cutting application initial load time from **30 to 9 seconds** during peak times.
- Pioneered **scalable system architecture** by designing and implementing the migration of booking APIs to an **event-driven architecture** with **AWS SQS FIFO** and **Lambdas**, reducing server count from **12 to 8** during peak time.

### Software Engineer

June 2021 - May 2023

#### [Freespace](#)

Mumbai, India

- Led migration to SPA with **React routing**, route-based and custom **Webpack code splitting**, **HOCs**, doubling first-load speed and improving repeat visits by **10 seconds**.
- Developed a custom frontend component library created with **React**, **TypeScript**, and **Storybook**, delivering tailored branding styles for clients and boasting UI consistency and development efficiency.
- Designed and implemented a **serverless** notification system leveraging **AWS Lambda**, **SQS**, **SNS**, and **SES** for scalability, with multi-channel support (email, push, SMS) and a **CloudFormation stack** for automated infrastructure provisioning.
- Developed RESTful APIs using **Spring Boot** and **GraphQL** for an enterprise application serving **100,000+** users across **30+** global clients, managing up to **5,000** concurrent requests per minute.

## PROJECTS

- [MonkeyLang Interpreter \(ongoing\)](#): Building an **interpreter** in **Go**, featuring **lexical analysis**, **parsing**, and **AST evaluation**, with support for **custom scripting** including variable bindings, control flow, functions, and a **REPL** for real-time code execution.
- [SpaceLink](#): Developed a 2D virtual space platform for real-time avatar interactions, with **WebSockets** and **Protobuf** for efficient data transfer. Integrated video calls via **WebRTC** and managed data with **PostgreSQL**, using **TypeScript**, **Prisma**, and **Next.js**.
- [InfraBoost](#): Built a developer utility to provision **AWS** infrastructure on demand in **under 2 minutes** using **TypeScript**, **GraphQL** API, **Terraform** templates, and a **Next.js** frontend, deployed with **Docker**.

## ACHIEVEMENTS, AWARDS, AND LEADERSHIP

- **Awarded Freespace Captain** for successfully leading the team, utilizing exceptional problem-solving skills, and ensuring timely delivery of project deliverables
- **3rd in Smart India Hackathon** qualifier 2020 for license plate recognition and automated parking system using Raspberry Pi.
- **1st in Technical Paper Presentation**, Crescendo 2021 held in Fr. Conceicao Rodrigues College of Engineering.