

Oswin Alex

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EXPERIENCE

Software Engineer

Sept. 2025 – Present

MIDGENIE AI LABS PRIVATE LIMITED *mple.ai*

Mumbai, India

- Working on **mple.ai**, an **AI-powered sales training and agentic learning platform** delivering realistic customer service and sales roleplay simulations.
- Built **robust error tracking mechanisms** with contextual error codes, improving observability and reducing time-to-resolution for production issues.
- Developed and optimized **backend APIs** using **Node.js** and **NestJS** to support scalable roleplay workflows and analytics pipelines.
- Contributed to **full-stack development**, implementing user-facing features in **React.js** and integrating them with backend services.
- Built **dashboard analytics** using **MongoDB aggregation pipelines and charts**, providing insights into user engagement, roleplay performance, and system health.
- Implemented a **persona customization feature**, enabling dynamic control over AI avatar behavior, tone, and background for multiple training scenarios.
- Worked on **real-time communication** using **WebSockets**, improving reliability and synchronization for live AI avatar interactions.
- Created and shipped multiple **product features** across the development lifecycle, from requirements to deployment.
- Actively handled **bug fixing, performance optimization, and production issue resolution**, ensuring platform stability and high user satisfaction.
- Collaborated with **product, AI, and engineering teams** to enhance platform **scalability, reliability, and user experience**.

OPEN SOURCE CONTRIBUTIONS

Frappe Framework **OAuth2 Refresh Token Fix** [PR #36145](#)

- Contributed to the **Frappe Framework** by fixing an issue where **OAuth2 refresh token requests returned 403 Forbidden** due to permission validation errors.
- Identified that token validation methods were accessing **OAuth Bearer Token** documents without **ignore_permissions=True**, causing failures when executed under guest context.
- Implemented a fix by adding **ignore_permissions=True** and correctly setting **request.user = otoken.user** to comply with **OAuth2 RFC 6749 specifications**.
- Added automated test cases and verified compatibility with existing OAuth2 authentication flows.
- Impact: Improved **OAuth2 refresh token authentication reliability** and resolved a critical permission issue affecting token renewal.

EDUCATION

Don Bosco Institute of Technology

Dec. 2021 – May 2025

Bachelor of Engineering in Information Technology (CGPA- 7.25)

Mumbai

Xaviers Technical Institute

Sep. 2019 Sep. 2022

Diploma in Electronics and Telecommunication Engineering (Percentage- 74.03)

Mumbai

ACHIEVEMENTS

- Winner Innovex 2025, DBIT Annual Project Exhibition** Mar. 2025
Project: LawQuest The School Edition Mumbai
- Won **1st place** for developing a gamified learning platform promoting legal awareness for school students.
- Finalist Yukti Startup Innovation Challenge 2024** Mar. 2024
Innovation: Centralized System for De-addiction Centers Mumbai
- Selected among top finalists for presenting a scalable digital rehabilitation management system.
- Winner Smart India Hackathon 2023 (SIH1366)** Dec. 2023
Problem Statement: Centralized System for De-addiction Centers Udaipur
- Led development of a full-stack centralized system enabling real-time patient tracking and RBAC-based access.

CERTIFICATION

- AWS Academy Cloud Foundations [Link](#)** Apr. 2025
Issued by Amazon Web Services
- Completed a foundational cloud computing course covering core AWS services, architecture, pricing, and support.
 - Gained practical knowledge of core AWS services such as EC2, S3, IAM, VPC, RDS and Lambda.
 - Developed a strong understanding of cloud security, shared responsibility model, IAM, and compliance frameworks.

PROJECTS

AI-Based Edema Score Assessment System

- Developed a web platform to assess **edema severity** using a structured questionnaire and automated scoring system.
- Implemented **AI-powered doctor avatar** enabling users to interact through real-time chat for symptom guidance.
- Built an **AI-based report generation system** that analyzes responses and generates medical assessment reports.
- Designed APIs and backend logic for **edema scoring, patient response processing, and report delivery**.
- Tech Stack: **Next.js, NestJS, MongoDB, Tailwind CSS**

Centralized De-Addiction Centers System

- Developed a centralized platform to manage rehab centers and streamline operations.
- Implemented a **Role-Based Access Control (RBAC)** model ensuring secure multi-role access.
- Built full **CRUD operations** for patients, appointments, schedules, and staff.
- Integrated **Leaflet.js** for displaying nearby centers on an interactive map.
- Secured sensitive data using **Blowfish encryption**.
- Tech Stack: **React.js, Node.js, Express.js, MongoDB, TypeScript**

Data Analysis and Prediction on Drug Addicts

- Conducted exploratory data analysis and implemented ML models to predict recovery duration.
- Identified key demographic and behavioral trends impacting addiction recovery.
- Tech Stack: **Pandas, NumPy, Scikit-learn, Matplotlib**

SKILLS

Programming Languages: Java, Python, JavaScript, TypeScript

Web Development: React.js, Tailwind CSS, Node.js, Express.js, NestJS, Bootstrap

Mobile Development: Flutter, React Native

Databases: MySQL, MongoDB

Cloud & DevOps: AWS, Render, Git, Docker, Jenkins

Data Analysis: Pandas, NumPy, Scikit-learn, Matplotlib, Power BI