## Raj Mate

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Skills: IOS Development, Swift, Java, Android Development, 3D Modelling, SwiftUI

#### Internships

## April 2025 to September 2025

## **Karage Robotics**

## **Machine Learning Intern**

- Attained 1st place at Ideathon, NIT Bhopal (top 5% of 200+ teams); selected for internship at Karage Robotics.
- Constructed a predictive model within the ML-powered software, enabling precise
  pesticide application, resulting in a significant reduction in environmental impact by
  25% compared to traditional methods.
- Secured 30%+ reduction in pesticide use through predictive pest detection, advancing smart agriculture efficiency.
- Crafted a real-time monitoring system that tracks soil health and pest activity, improving crop management strategies and decreasing pesticide reapplication by 15%.
- Collaborated with local farmers to conduct a pilot program, validating model accuracy and improving pesticide application timing, leading to a 20% increase in crop yield.

#### **Achievements**

- Won SolVIT Hackathon at VIT Bhopal (Top 1 of 100+ teams) for building a hospital resource forecasting system using ARIMA and XGBoost.
- Won Ideathon at NIT Bhopal (Top 1 of 200+ teams) for prototyping an ML-based automated pesticide management system.

#### Education

June 2026 VIT Bhopal University Cumulative CGPA :- 8.12/10

April 2022 NPPS Percentage :- 82%

April 2020 Lexicon International School Percentage:- 79%

### **Projects**

- Designed "Mess Food Monitoring" app (Jan–Mar 2025) for hostel students at VIT Bhopal; built time-triggered UI to auto-display meals, cutting manual checks by 100%.
- Integrated real-time updates and feedback system; collected 200+ responses, enhancing features and satisfaction for 500+ users.
- Engineered a live weather app using Xcode Swift and REST APIs; integrated 3+ data sources for accurate global forecasts.
- Served **5,000+ cities** with less than 2s response time; hit **1,000+ downloads** in month one and earned a **4.5 rating** from **500+ reviews**.