

# HARIHARAN MOHANRAJ

SOFTWARE DESIGN ENGINEER | Team Lead

## CONTACT

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## SKILLS

- Programming Languages:** Python, Java, JavaScript, React.js, Node.js
- Databases:** Room, SQLite, Redis
- Web Services:** RESTful APIs, Retrofit, Volley
- Project Management Tools:** GitHub, Bitbucket, Asana, Monday.com, Click-Up
- Operating Systems:** Windows, Linux (Ubuntu), Android, Mac

## CORE COMPETENCIES

- Software Development
- Team Leadership and Project Management
- Drone and Aviation Software Development
- Fullstack Development
- Algorithm Design and AI Integration
- Artificial Intelligence and Machine Learning

## PROFILE

A seasoned software professional with 10+ years of experience specializing in aviation and drone technology, AI/ML applications, and Android and web application development. Demonstrated expertise in leading cross-functional teams to deliver innovative and efficient solutions. Currently contributing as a Team Lead, focusing on creating cutting-edge systems for drones, aviation, and AI-powered solutions.

## WORK EXPERIENCE

### Software Design Engineer

NewSpace Research & Technologies

December 2022 – Present

- Leading multiple projects as a team lead, ensuring timely delivery and high-quality output.
- Developed sophisticated software solutions for drone interaction, communication, and control.
- Designed user-friendly web applications for Ground Control Stations (GCS) using React.js and Mapbox for real-time drone monitoring and command execution.
- Created algorithms for swarm control, enhancing mission efficiency and coordination among drone fleets.
- Integrated Redis for real-time data sharing across web clients, ensuring robust and synchronized operations.
- Applied Artificial Intelligence (AI) and Machine Learning (ML) techniques to optimize drone behavior, enhance predictive maintenance, and improve mission success rates.
- Engineered AI-driven decision-making systems to support autonomous drone operations and battlefield simulations.
- Developed systems for tracking flights with Ground Data Terminals (GDT), enabling efficient communication and real-time monitoring of aircraft and drones.

### Senior Software Engineer

GoAugment | Coimbatore

June 2020 – November 2022

- Developed Android and web applications catering to diverse industries, including e-commerce, social media, and news platforms.
- Optimized application performance and integrated advanced features like real-time updates and secure payment gateways.

### Senior Software Engineer

Dextrasys Technologies | Trichy

October 2017 – June 2020

- Built feature-rich CRM applications and professional networking platforms.
- Enhanced user experience through intuitive UI/UX designs and push notifications.

## EDUCATION

## Bachelor of Engineering (B.E.) in Computer Science & Engineering

**MAM School of Engineering,  
Trichy**  
2010-2014

## LANGUAGES

English 

Hindi 

Kannada

Tamil 

## Software Developer

Opus Infiniti Pvt. Ltd | Trichy

July 2015 – September 2017

- Built feature-rich CRM applications and professional networking platforms.
- Enhanced user experience through intuitive UI/UX designs and push notifications.

## Business Consultant

Sutherland Global Services | Chennai

September 2014 – April 2015

- Provided technical support for Amazon Canada and Amazon India customers, optimizing their e-commerce experience.

## KEY PROJECTS

## ARHMD (Augmented Reality Head-Mounted Display)

- Enhanced Ground-Based Air Defense Weapon Systems through AR technology.

## ROSCON Tool

- Developed a React.js-based tool using Mapbox for monitoring and controlling drone behavior.

## Swarm Control Algorithms

- Engineered advanced algorithms to improve coordination and performance of drone fleets during complex missions.

## AI and ML Solutions for Drone Operations

- Implemented predictive maintenance models using machine learning to enhance drone reliability.
- Designed AI-driven systems to analyze drone flight patterns and optimize mission planning.

## Flight Tracking with GDT

- Built systems to enable real-time flight tracking and efficient communication with Ground Data Terminals (GDT), ensuring seamless coordination for drones and manned aircraft.

## HelloLeads CRM

- Designed a smart lead capture and management solution to streamline sales processes.