

NIKHIL KSHIRSAGAR

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SUMMARY

Developer with experience building production ML systems from data pipelines to deployment. Worked across computer vision, RAG systems, and real time platforms, handling both model training and backend infrastructure. Comfortable moving between training object detection models, optimizing vector databases, and building APIs that scale. Focused on end-to-end implementation rather than siloed specialization.

EXPERIENCE

Computer Vision Intern

 06/2025 Present  Pune

Inditronics Pvt Ltd

- Created **image collection pipeline** for OTT and Linear TV streams, creating training datasets for **YOLO-based object detection** deployment on **Advanced People Meter hardware**
- Automated data preprocessing workflows**, reducing manual processing time by 40% while maintaining **90% data quality standards**
- Trained and evaluated YOLO, Segmentation, InsightFace, and OCR** models for **cross-platform content analysis** across **multiple regional markets**

Python Developer Intern

 01/2025 06/2025  Pune

BotPlus LLP

- Built **production RAG system** handling 30,000+ documents with consistent **2-5 second response** times for legal advising chatbot.
- Configured Qdrant with **optimized HNSW parameters** and metadata-based filtering that reduced average retrieval time from **15+ seconds to 2-5 seconds**

PROJECTS

PlotTwist - Collaborative Storytelling Platform

- Python • FastAPI • MongoDB • Next.js
- Developed **real-time competitive writing** platform where users collaboratively create and review stories through **gamified voting mechanics**
- Engineered FastAPI backend with **JWT authentication, token rotation, and role-based access control** for secure async MongoDB operations
- Applied **WebSocket-based peer rating system** with anonymous star feedback and **real time critique aggregation**

HouseBuddy - AI Real Estate Assistant

- Python • Flask • RAG • Next.js • Qdrant
- Designed a **RAG-powered conversational system** that answers property inquiries using **scraped real estate documents**, ensuring consistent and verified responses
- Added **multilingual support** (Hindi, Marathi, Tamil, Telugu) via Hugging Face models for regional language queries
- Ensured conversation persistence with **save, bookmark, and export features**

AquaAnalyzer - Fish Detection and Monitoring

- Python • Selenium • CV2 • YOLO • Twilio API
- Deployed YOLOv8 detection system processing **30 FPS video feeds at 90% accuracy across 5+ species**, eliminating manual hourly population checks
- Built geofenced dissolved oxygen monitoring with threshold detection, **reducing critical incident response from 2+ hours to under 5 minutes**
- Integrated **Twilio SMS alerts** for oxygen depletion, mortality spikes, and population anomalies to prevent mass fish loss

EDUCATION

Master of Computer Application

Modern College Shivajinagar

 07/2023 06/2025  Pune

Bachelor of Computer Science

Nowrosjee Wadia College

 2019 2023  Pune

SKILLS

Programming languages:-

- Python
- Java
- React

Framework:-

- Fast API
- Flask
- Next

Database & Cloud:-

- MongoDB
- MySQL
- Azure

Developer tools:-

- VS Code
- Docker
- Git Hub

Libraries:-

- Pandas
- Numpy
- Selenium
- CV2

LANGUAGES

English	Proficient	
Hindi	Proficient	
Marathi	Advanced	

FIND ME ONLINE

 Web Site [Nikhil kshirsagar portfolio](#)

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 Email nskshirsagar434@gmail.com

 Git Hub [Nikk434](#)

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