

# KRATIK PALIWAL

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## EDUCATION

**Bachelor of Technology** (B.Tech), NMIMS University, Mumbai, India

2022 - 2026

## SKILLS

Languages	C, C++, Python, JavaScript, Dart, HTML, CSS, Dart, Latext, Markdown
Libraries/Frameworks	TailwindCSS, Bootstrap, NodeJS, ExpressJS, ReactJS, Flutter
Machine Learning	Supervised Learning, Deep Learning, Ensemble Methods, Feature Engineering, Model Evaluation
Databases & Tools	MongoDB, MySQL, Linux, Git, Figma, Postman, Github
Relevant Coursework	Data Structures and Algorithms, Object Oriented Programming, Operating Systems, Computer Networking, Design and Analysis of Algorithms

## WORK EXPERIENCE

### Research Intern

May 2025 - Aug 2025

Indian Institute of Information Technology, Nagpur ([iiitn.ac.in](https://www.iiitn.ac.in))

Nagpur, Indore, India

- Conducted applied ML research in sports analytics, contributing to a scalable **ensemble model** for football match outcome prediction under the guidance of Dr. Jitendra V. Tembhurne
- Developed predictive models using a three-layer ensemble framework combining **XGBoost**, **BiLSTM**, **1D-CNN**, and a **Logistic Regression** meta-learner, achieving higher accuracy than standalone models
- Automated preprocessing pipeline for cleaning 13,000+ match records and engineering 40+ statistical and performance-based features, optimizing data preparation for end-to-end machine learning workflows
- Co-authored an implementation-driven research paper on ensemble football match outcome prediction

## PROJECTS

### Ensemble-Based Football Match Prediction System

Guide: Dr. Jitendra V. Tembhurne, (Assistant Professor, IIIT Nagpur)

- Built** end-to-end football prediction system using **XGBoost**, **BiLSTM**, and **1D-CNN** ensemble with **Logistic Regression** meta-classifier, achieving **86.4%** cross-validated accuracy on **13,000+** European league matches
- Constructed** automated data pipeline extracting **40+** engineered features (home team, away team, home team success%) from multi-season match records, enabling **reproducible** training and robust model performance
- Executed** model optimization through **hyperparameter tuning**, **k-fold cross-validation**, and **SHAP** feature analysis, preventing overfitting while maintaining **88%+** prediction accuracy

### Trade Twice Campus Marketplace

Guide: Dr. Venkatadri Marriboyina (Associate Dean, NMIMS University)

- Delivered Flutter/Dart** cross-platform marketplace with **Firebase Authentication** and **Cloud Firestore**, transforming college student buy/sell experience for **40+ users**
- Built** product management system with **CRUD operations** and real-time database synchronization across **6+ screens** eliminating WhatsApp message thread product disappearance
- Integrated third-party APIs** (ImgBB) and **Firebase Cloud Storage** with **asynchronous programming** for image uploads, implementing **permission handling** and **state management** for seamless user experience

### Collabify Team Collaboration Platform

- Built** full-stack collaborative platform using **MERN stack** and **Socket.IO**, enabling real-time document editing with live synchronization across multiple users, **improving project partner discovery time by 20%**
- Implemented** secure authentication system with **JWT tokens** and **RESTful API** endpoints for user management, document operations, and session handling, separating frontend (React) and backend (Node.js/Express) layers
- Designed** scalable architecture with environment-based configuration, static asset serving, and real-time broadcast mechanism for collaborative edits with **MongoDB** persistence

## ACHIEVEMENTS

- Build With India Hackathon**, Secured 8th position among 5000+ participating teams in national-level hackathon competition
- Ranked 4,717th** out of **500,000+ participants** in **TCS CodeVita**, a global coding competition, demonstrating strong problem-solving and algorithmic skills