

AMIT KALAL

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EXPERIENCE

Software Engineer | SportsForAll | Sep 2024 – Present

Game Management System: A Django REST Framework-based sports operations platform built with modular API architecture to manage players, stats, and training engagement. Integrated relational database (PostgreSQL), token-based auth, and CRUD endpoints to support role-based access for coaches, marketers, and event managers.

- **Spearheaded three full-cycle ML POC's to address sports analytics challenges:**
 - **Sponsorship Branding Detection:** Developed an image recognition pipeline to extract SFA and sponsor branding from audience images, helping quantify marketing ROI
 - **Automated Video Labelling:** Built a deep learning model on 100k+ frames to detect players and extract per-player stats from match videos (83.5%+ accuracy on test set)
 - **Voice-Powered Stat Assistant:** Created a voice-enabled analytics interface that retrieved and visualizes player stats via speech commands, improving stat accessibility for marketing and operation team
- **Delivered Production ML feature within the Game Management System(Django-based) to:**
 - Predict **player engagement and package buying behaviour**, added a recommendation feature, improving targeting for sports packages and training offers

Project Analyst | HUDL | May 2024 – Aug 2024

Hudl Performance Suite: A video analysis and performance platform for sports teams and athletes to improve gameplay and coaching effectiveness.

- **Labelled** sports video data using internal annotation tools to support **computer vision model training**.
- Applied basic **tagging logic** for key player movements and game events with high accuracy.
- Worked with **structured video datasets** to assist **data preparation** and **pipeline input** for **AI/ML workflow**

Data Analyst Intern | SportsForAll | Nov 2023 – March 2024

Participant Intelligence Dashboard: Internal Business dashboard aggregating event and user data to support campaign planning and marketing ops.

- Conducted **exploratory data analysis (EDA)** on 100k + participant data.
- Created interactive **dashboards** using **Matplotlib** and **Plotly** and **Google looker studio** for business and marketing teams

Data Science Intern | Prodigy InfoTech | Aug 2023 – Oct 2023

Data Analytic Engine: Scalable data analytics for market research insights.

- **Data Preprocessing:** Automated data cleaning and monitoring to enhance analytic system stability.
- Tools/technologies: Python, NLP toolkits, PostgreSQL.

PROJECTS

AI Fashion Semantic Search Engine

Tech Stack: Langchain, FAISS, OpenAI, FastAPI, React

- Developed a **Retrieval-Augmented Generation (RAG)** system for semantic document search in the fashion domain, Utilized **BLIP models** to generate image captions stored embeddings in a **FAISS vector database**, and enabled **natural languages querying** for enhanced search capabilities. ([Project Link](#))

Table-Tennis Stat Analysis

Tech Stack: PyTorch, Yolov5 and Yolov5, Streamlit

- Trained on over 5,000+ **supervised and unsupervised** video frames containing players, ball, and table environments to detect player motion, analyze ball speed, and predict player actions. Compared **YOLOv5** and **YOLOv8** across 100 **training epochs** — YOLOv5 performed better for player detection, while YOLOv8 showed superior precision for ball tracking. Deployed using **Streamlit** for interactive annotation and visualization. ([Project Link](#))

EDUCATION

University of Mumbai (*Mumbai, Maharashtra, India*) | Sep 2020 – July 2023

Bachelor of Science in Information Technology, CGPA - 9.35/10

SKILLS

Programming: Python, SQL, JavaScript | **Libraries:** PyTorch, TensorFlow, PyTorch, HuggingFace Transformers |

Engineering: AWS, Docker, MongoDB, RESTful APIs, Hadoop | **Statistics:** Bayesian Inference, Graphical Modeling, K-means Clustering, Regression