Pedro Afonso Monteiro Pedro

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PROJECTS

VirtIAFut

Built a pipeline for detecting, tracking, and predicting player/ball movements in football videos.

- Applied **YOLOv8** for object and field keypoint detection
- Used **ByteTrack** for tracking.
- Clustered teams by color using **SigLIP**, **UMAP**, and **K-Means**.
- Created a dataset of 500+ frames with player/ball coordinates.
- Developed a **Transformer** prediction model (MAE: 900.69, RMSE: 1200.57, R^2: 0.5171).
- Applied homography to project coordinates onto a 2D field, visualizing predictions vs actual movements.

Data Analysis – Euro 2024

Analyzed Euro 2024 matches using StatsBomb Open Data and **Python**.

- Deployed with **Streamlit**.
- Visualized key match statistics (xG, shots) by team and player.

EDUCATION
Computer Engineering Bachelor, Polytechnic Institute of Leiria

CERTIFICATES
Git Certified Specialist by GitKraken, GitKraken
Get the most out of JIRA, Atlassian

SKILLS & INTERESTS
Languages: Native in Portuguese, Fluent in English
Technical: Python, SQL, Excel, AI Studio, Tableau, PowerBI, Docker, Git, GitKraken, JIRA, BitBucket, Streamlit
Interests: Computer Vision Tools, Data Analytics in Sports, Football Manager
Experiences: University Futsal Team Captain, 3x National University Futsal Championships – 3rd place twice