SkillCorner Tracking Analysis Case Study

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Focus: Applied tracking insights, client-facing communication, and analytics workflow design

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Project Overview

This project demonstrates how raw basketball tracking data can be transformed into **clear, actionable insights** that support coaches, scouts, and high-performance staff.
Built using a simulated possession dataset modeled after modern tracking structures, the analysis highlights how automated positional data can inform:

- Player tendencies
- Space creation and advantage
- Drive paths and efficiency
- Defensive pressure and decision contexts

Methods & Tools   **Languages:** Python (Pandas, NumPy, Matplotlib, Seaborn)
Workflow:

- Data cleaning and preprocessing
- Creation of derived metrics (speed, acceleration, COD load, separation)
- Density heatmaps (movement & defender pressure)
- Advantage mapping
- Court-overlaid trajectory visualizations
- Player profile radar chart

Client-facing focus:
All visualizations and definitions were designed for clarity so coaches, analysts, and performance staff can quickly interpret player tendencies.

Key Insights

- The guard generated their highest speeds attacking **left-to-right downhill lanes**.
- Movement density around the **nail and slot** suggests comfort operating in PnR or isolation entry actions.
- Defender-pressure heatmap shows separation peaks during **east-west change of direction**, not straight-line speed.
- Advantage states increased most when the guard **attacked early in the possession** (high tempo value).

Relevance to SkillCorner: This project demonstrates the ability to:

- Analyze tracking data with clarity and consistency
- Communicate findings in a professional, client-facing manner
- Build visual explanations that support scouting, coaching, and performance workflows
- Collaborate cross-functionally (analysis, product, client success)
- Translate raw positional data into meaningful basketball context

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