Project Name PocketSports: The Digital Coaching App

Team Lead: Garrett Gmeiner

Team Member(s): Taylor Carlson, Tyler Ton, Parker Cummings

Faculty Advisor(s): Dr. Fitzroy Nembhard, Dept. of Electrical Engineering and Computer

Science, Florida Institute of Technology

Project Description:

PocketSport: The Digital Coaching App is a comprehensive web-based solution designed to streamline and enhance coaching tasks for multiple sports. It combines drill and practice-plan creation, goal-setting, scheduling, and real-time performance tracking into a single, user-friendly platform that is affordable, scalable, and accessible to coaches, players, parents, and team owners. By consolidating functionalities that traditionally require several disconnected tools, PocketSport reduces operational complexity and promotes more efficient communication and engagement across teams.

Design Problem Statement:

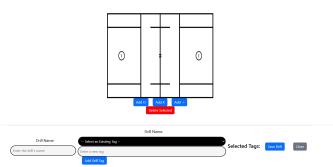
Existing sports coaching solutions often focus on narrow areas, such as drill sketching or stat tracking, forcing teams to juggle multiple applications. This is especially burdensome for smaller or emerging sports programs that need a single platform to plan practices, set goals, track performance, and maintain accessible records. PocketSport addresses these gaps by offering an all-in-one digital coaching solution that is both cost-effective and configurable to multiple sports.

Major Challenges:

Major challenges include designing multi-sport interfaces with customizable drills and animations, and implementing real-time collaboration (e.g., websockets) for simultaneous practice-plan creation. The system must also handle offline data syncing, maintain a clean, scalable UI with robust security, and support performance tracking through the secure collection and visualization of individual and team data.

Solution Methods:

PocketSport is built on a MERN stack (MongoDB, Express, React, Node.js) for modular design and scalability. Real-time collaboration is achieved through websockets for shared drill creation and practice execution. Role-based dashboards and charting libraries ensure secure, visual performance tracking.



Data Analysis:

PocketSport collects and stores user-entered stats (e.g., shots, goals, reps, time spent on drills) in a centralized database, allowing historical performance tracking. Coaches can generate visual insights, through charts, progress bars, and goal completion metrics, helping teams identify strengths, weaknesses, and overall trends. Eventually, these statistics could inform advanced analytics or Al-driven recommendations for drill selection and goal setting.

Summary Sentence:

PocketSport is an all-in-one digital coaching platform that consolidates practice planning, performance analytics, and goal tracking into a single, user-friendly application, empowering teams of any size or sport to efficiently manage and elevate their training experience.