

## PocketSports: A Digital Coaching App

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Date(s) of Meeting(s) with the Client for developing this Plan: **8/27/2024 1:00pm**

Date(s) of Meeting(s) with the Advisor for developing this Plan: **8/28/2024 11:00am**

Goal and motivation:

- Up-and-coming sports need bigger platforms
- Many apps only focus on one end of coaching (practice plans/drills, goal setting, etc...)
  - Increases the need for multiple apps per team
- Reduce the need for multiple apps
- Fitting multiple sports on a single app
- Making it affordable for smaller teams/ communities
- Increasing limited competition for expansion/ market share

Approach (key features of the system):

### Coaches

- Set and Track Goals Effortlessly
  - Create and manage goals for individuals and teams with ease, enabling clear, actionable objectives and tracking progress through engaging interactive visuals. Monitor achievements over time to make informed decisions and drive performance.
- Design Your Practice Plan
  - Plan your practices with precision using animated field and court views. Create detailed drills and plays that are easy to visualize and understand. Our drag-and-drop feature allows you to build and organize your practice sessions seamlessly. Share your comprehensive practice plans with your team to ensure everyone is on the same page and ready to excel.
- Execute and Analyze Practice Plans
  - Implement practice plans confidently and monitor progress in real-time. Record player statistics and track time spent on each drill to gain valuable insights into individual and team performance. Use this data to assess progress toward goals, identify areas for improvement, and refine strategies for better results.

## Players

- Create Goals and Monitor Progress
  - Elevate performance seamlessly, blending goal-setting and progress tracking. Set ambitious targets and monitor achievements with a sleek, interactive dashboard. Enjoy real-time updates and dynamic visuals that keep motivation high and provide sharp insights for continuous improvement. Reach new heights and stay ahead of the game!
- Be Ready to Practice
  - Stay organized with a calendar view that lets players see their daily practice schedule at a glance. Easily track practice times, locations, and focus areas to ensure you're always prepared and on top of your game.
- Review Practice Results
  - Get instant access to detailed results and stats right after practice. See performance metrics and coach feedback to understand your strengths and areas for improvement.

## Novel features/functionality

- Practice Plan creation, execution, and goal setting with performance monitoring all in one location is new. Many apps only focus on one end of coaching. This allows teams to reduce the number of apps needed and puts everything in one place.

## Algorithms and tools

- Web Application
  - Ability to view player's current performance
    - React & Chart.js for displaying performance data
    - Node.js with express to handle backend
    - MongoDB database
  - Ability to create and track goals for both individuals and team
    - MongoDB database to store all the goals
    - Schema to format data
    - Post-request data from frontend
  - Ability to create a practice plan
    - Utilization of web sockets in order to create plans
    - Web sockets are used to create collaborative tools
    - WS package to install
  - Ability to execute a practice plan
    - React for frontend
    - Node.js with express to handle backend
    - MongoDB for database
- Project Management
  - Jira
    - Project management

- GitHub
  - Code repository
  - Hosting Website
  - Code reviews
- Git
  - Intermediate with local and remote branches
  - Pushes branch to GitHub
- Google Docs/Slides
  - Allows document collaboration

### Technical Challenges

- We plan to have the ability to view the player's current performance, but we need to ensure updates to a database when possible for offline modes.
- We plan to have the ability to create and track goals for both individuals and teams, but we need graphically pleasing charts.
- We plan to have the ability to create a practice plan. Still, we need custom play/practice plan creation from different users simultaneously and to save previous plays to continue working on it at a later time.
- We plan to have the ability to execute a practice plan, but we need to be able to keep track of time and save and update the database when coming back online.

### Milestone 1 (Sep 30)

- Have the required documents completed
- Create Database Schema
- Create Website design
- Create a roadmap for web socket creation

### Milestone 2 (Oct 28)

- Have a valid, working login with a simple user interface
- Create a database to store login information using MongoDB
- Create and test the goal tracker feature for coaches

### Milestone 3 (Nov 25)

- Create field outline and feature for drills
- Create, replace, update, and destroy practice plan feature
- Research how to train an AI model

### Task matrix for Milestone 1

Task	Garrett	Tyler	Parker	Taylor
Create Website design	10%	10%	40%	40%

Roadmap for web socket creation	10%	50%	20%	20%
Create a database schema	40%	40%	10%	10%
Required Documents finished	40%	20%	20%	20%

Approval from Faculty Advisor:

- "I have discussed with the team and approve this project plan. I will evaluate the progress and assign a grade for each of the three milestones."
- Signature: \_\_\_\_\_ Date: \_\_\_\_\_