

# 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/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.

## Technical Challenges

- We plan to have the ability to view 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 a valid, working login with a simple user interface
- Create a roadmap for web socket creation
- Create a database to store login information using MongoDB
- Have the requirements document completed

### Milestone 2 (Oct 28)

- Create field outline and feature for drills
- Create, replace, update, and destroy practice plan feature

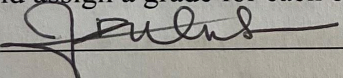
### Milestone 3 (Nov 25)

- Implement, test, and demo all of the features
- Have an idea of how to train an AI model

### Task matrix for Milestone 1

Task	Garrett	Tyler	Parker	Taylor
working login with a simple user interface	10%	10%	40%	40%
Roadmap for web socket creation	10%	50%	20%	20%
Create a database to store login information	40%	40%	10%	10%
Requirement Document finished	65%	10%	15%	10%

### Approval from Faculty Advisor

- "I have discussed with the team and approved this project plan. I will evaluate the progress and assign a grade for each of the three milestones."
- Signature:  Date: 8/28/2024

# Overall Project

## List of Requirements

- **\*\*Host on www domain\*\***
- Main Marketing Page (Landing Page)
  - A login button that takes you to a login screen
    - Create account
      - Name (First, last)
      - Email
      - Organization
      - Main Page
        - *Create Team*
          - Choose sport
            - Lacrosse
            - Basketball
            - Volleyball
            - Add more if we have time
          - Becomes Owner
          - Can invite people to the team
            - Need their emails
            - Adds as a player
              - The owner can manage roles as necessary
        - *Join Team*
          - Enter unique team code
          - Added to the roster as a player
            - The owner can manage roles as necessary
        - *View Team*
          - Current teams are shown, and the user can click on a team to view team information (Goes to inside User App View)
      - User account info is sent and stored in a database
    - Sign in
      - Email
      - password
    - Forgot Password link
      - Enter email address
        - Password reset is sent if an account with the address exists
  - Features Tab explaining different functionalities

- Our Motivation
  - Goes to Chan's Site
- Inside User Application view
  - All users
    - *Calander*
      - Can see if there is a plan for a particular day
      - Can click on the plan and view it
  - Owner
    - *Manage team*
      - Change roles
      - Remove players
      - Add members
  - Owner/Coach
    - *Create Drills/Plays*
      - Can view
      - Create button
        - Chooses from one of many field views
          - Animated drills/plays
          - Add a tag with drills (shooting, footwork, etc...)
            - Can add more than 1
          - Add possible stats to keep track of
        - Saves it to a drill bank (database?)
    - *Create Practice Plan*
      - Pull from a drill bank (database?)
      - Attach media/photos
      - It contains a graphic report (Pie Graph?)
        - Minutes
        - Practices
        - Drill Count
        - Drill type
      - Export to pdf, jpeg, png
      - Save, edit, and load practice plans
        - Create our own file type or find an existing one that will work
          - Csv?
          - JSON?
          - YAML?
    - *Execute Practice Plan*
      - The coach selects "start practice."

- The practice timer starts; the first drill timer also starts to time the duration.
- Can jump to “next drill” or skip around for a flexible practice
- The start and end times of the drills are saved/recorded (keeps track of time on each drill)
- Add individualized/team stats in real time
- *Year Planner*
  - Allocate points to each of the created tags for practice focus
  - Shows graphic if those goals are being met consistently
    - Ex: We want Passing at 100% efficiency, but currently is at 75% due to not doing passing drills recently in practice
    - We need to come up with a way to calculate that
  - Track progress for team goals
    - Ex: Basketball- Score more than 1,000 points this season
- *Player Goal tracker*
  - Enter goals for players based on metrics.
  - Shows graphical progress
  - Ex: We want a certain player's squat to increase to 315, and it's currently 275
- Can send the practice plan to players or parents (email, notification, etc.)
- The coach can restrict parents from viewing things
- Player/Parent
  - View practice plan
  - View drills in the practice plan with media
  - View terms and concepts

## List of Enhancements

- AI/ML recommendations
  - Drills, specific player's performance, and team's shortcomings