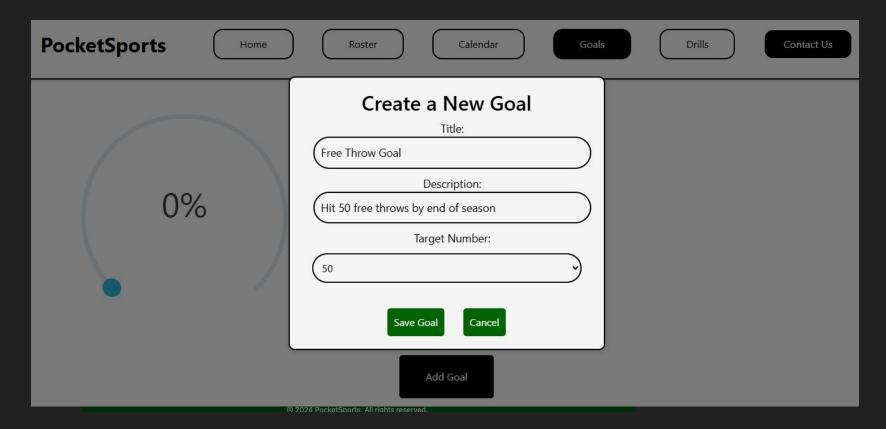


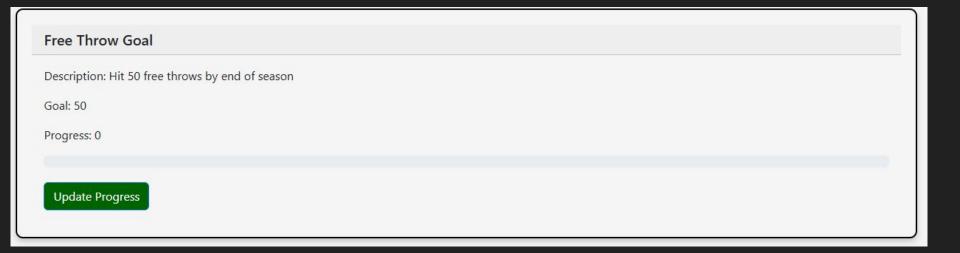
Pocket Sports

Taylor Carlson, Garrett Gmeiner, Tyler Ton, Parker Cummings

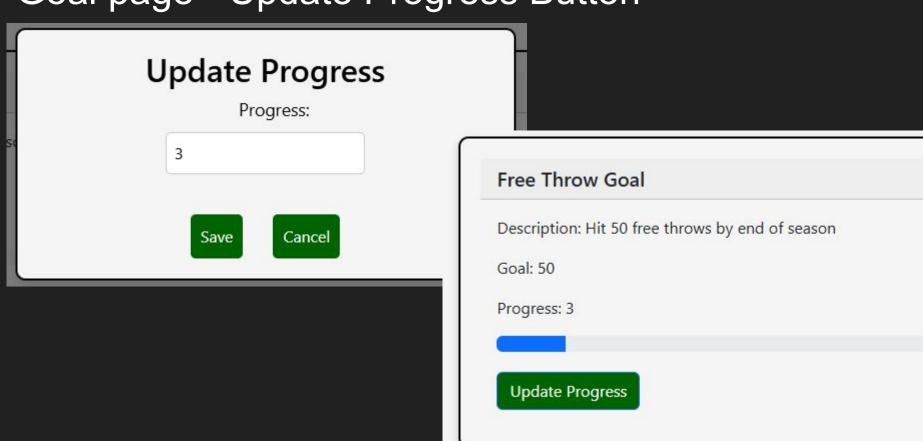
Goal Page - New Goal Feature



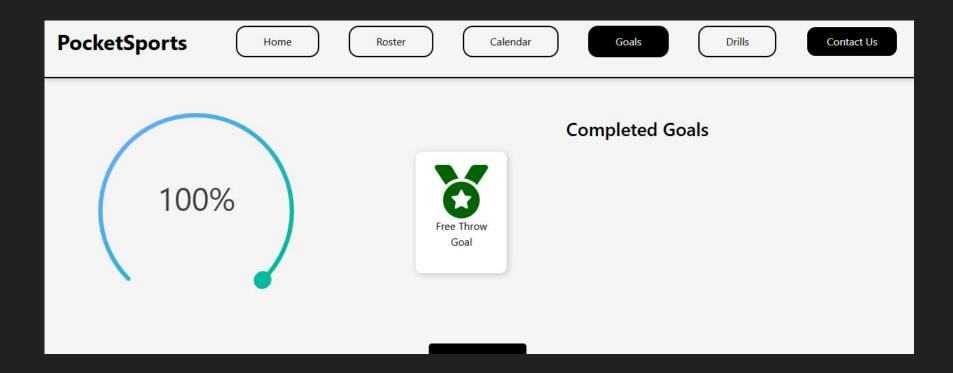
Goal Page Card



Goal page - Update Progress Button



Goal Page - Badges



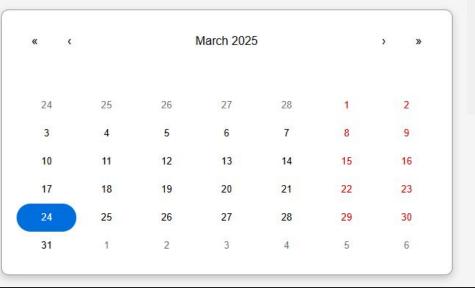
Calendar Page - Create Event Feature



Calendar Page

Are you sure you want to remove this event?

OK Cancel

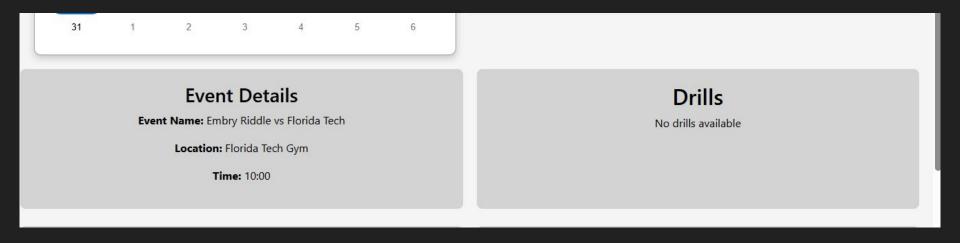


Events for Mon Mar 24 2025

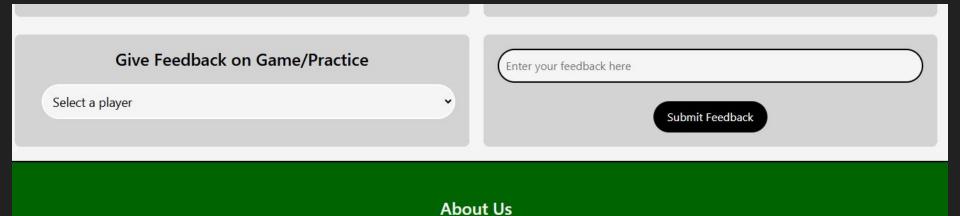
Monday Practice



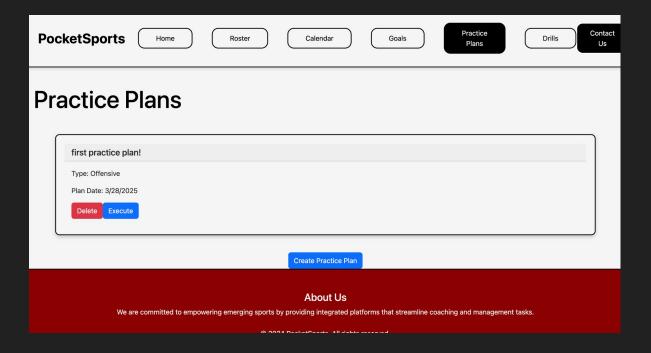
Calendar Page - Event Details and List of Drills



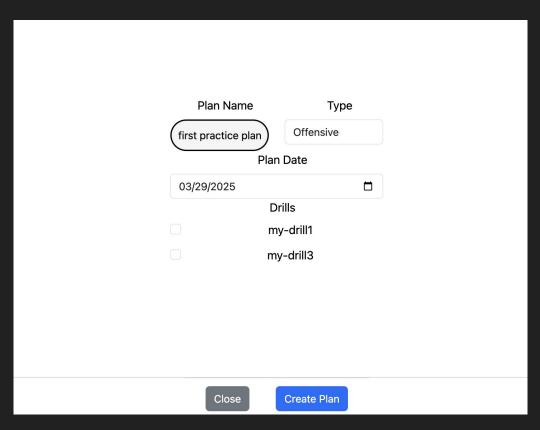
Calendar Page - Feedback Feature



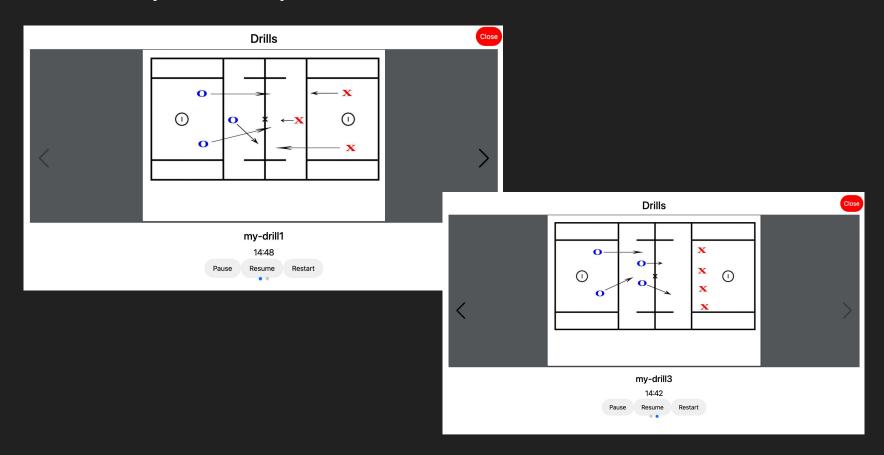
Create practice plan feature



Create practice plan cont'd



Execute practice plan feature

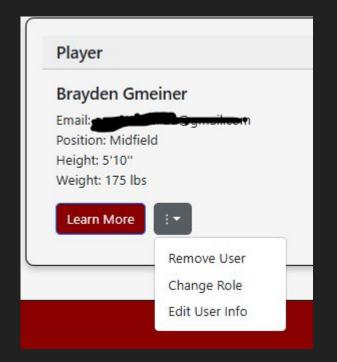


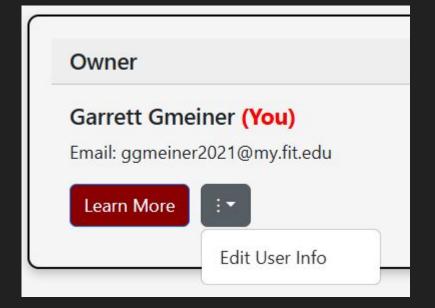
Video Demonstration



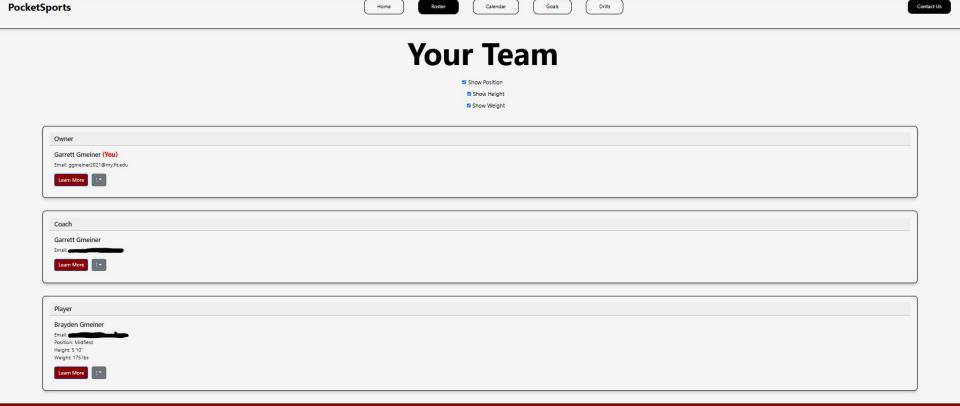
Roster user removal







Revamped Roster Page



Your Team

- Show Position
- ☐ Show Height
- ☐ Show Weight

Owner

Garrett Gmeiner (You)

Email: ggmeiner2021@my.fit.edu





Coach

Garrett Gmeiner





Player

Brayden Gmeiner

Position: Midfield

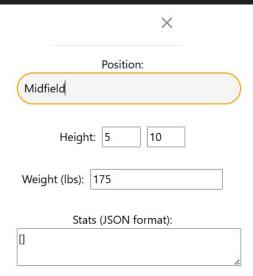




Change User Role

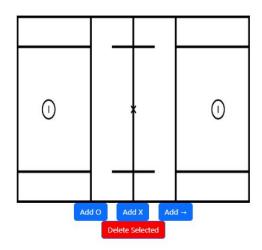


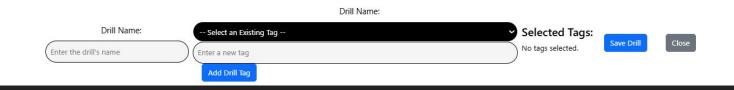
Edit User



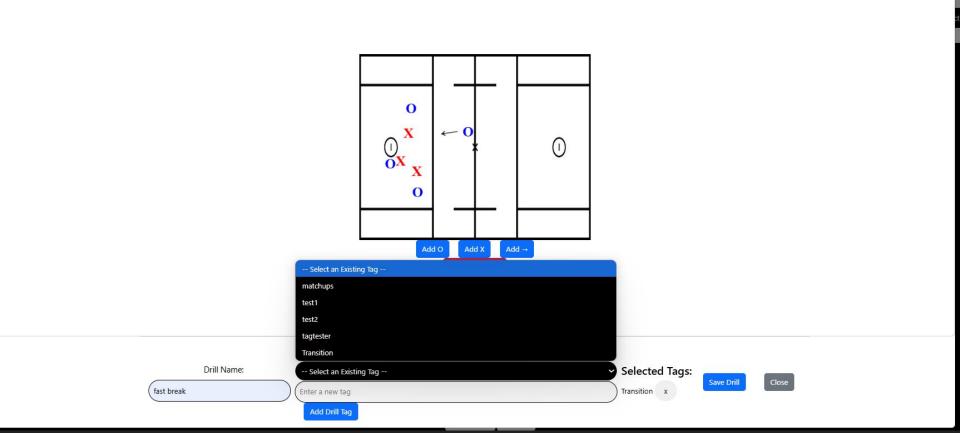


Drill Tags





Drill Tags



Create E-book page/Poster



PocketSports: The Digital Coaching App

Garrett Gmeiner, Taylor Carlson, Tyler Ton, and Parker Cummings Faculty Advisor(s): Dr. Fitzroy Nembhard, Dept. of Electrical Engineering and Computer

Science, Florida Institute of Technology

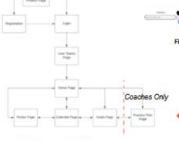
Abstract:

Lots of apps only focus on one end of coaching. PocketSports aims to eliminate the need for multiple apps by delivering a cross-sport app with an increased app functionality

Coaches can...

- 1. Set and Track Goals
- 2. Design Practice Plans
- Execute and Analyze Practice Plans

- Create Goals and Monitor Progress
- 2. View Practice Plans
- Review Practice Results



Methods:

- MERN Stack: Uses MongoDB. Express/Node.is, and React for a modular, scalable architecture.
- · Real-Time Features: Utilizes websockets for collaborative practice design, live drill tracking, and real-time stat updates.
- Data Visualization: Integrates Chart.is to display progress and performance metrics visually.
- Role-Based Access: Implements secure logins and role-specific dashboards for owners. coaches, players, and parents.
- · Goal Setting & Practice Planning: Offers interactive tools to design, store, and integrate drills into practice schedules.

Limitations and Improvements: Limitations

- Drill libraries and performance metrics are currently basic
- Partial offline functionality still relies on stable network access for optimal data sync
- = Lack of advanced Al-driven analytics for personalized training recommendations
- Improvements
- Expand sports-specific drill libraries for broader coverage
- = Enhance offline modes with robust caching and synchronization
- Integrate AI/ML capabilities to deliver more customized and data-driven coaching insights



Figure 3: Execution of my-drill3

System Architecture:

Tools Used:









Figure 2: Drill Creation Template

Acknowledgements:

Brad MacArthur, Men's Lacrosse Jordan Willis, Women's Volleyball Michaela Gelbaugh, Women's Basketball

[EECS]

Project Name PocketSports: The Digital Coaching App

Team Lead: Garrett Gmeiner

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

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

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:

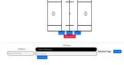
Existing sports coaching solutions often focus on narrow areas, such as drill sketching or stat tracking, forcing teams to juggle multiple applications. This is especially burdensome for smaller or emerging sports programs that need a single platform to plan practices, set goals, track performance, and 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.

Next Milestones

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Milestone 6:

- Add feedback feature
- System-wide testing and bug fixes
- Create User/Dev manual
- Create Demo Video
- Add stats of interest to drills
- Create Contact Us form

Milestone 6

Task	Garrett Gmeiner	Taylor Carlson	Tyler Ton	Parker Cummings
Add feedback feature	0%	50%	50%	0%
System-wide testing and bug fixes	50%	25%	25%	0%
Create User/Dev manual	25%	25%	25%	25%
Create Demo Video	0%	0%	0%	100%
Add stats of interest to drills	100%	0%	0%	0%
Create Contact Us form	0%	0%	0%	100%

Faculty Advisor Feedback









Questions?