Great question! Let me analyze what you have and suggest some powerful additions. Here are some ideas organized by category:

**📊 Performance Analytics & Trends**

**1. Individual Athlete Progress Dashboard**

* **PR (Personal Record) Tracking**: Show each athlete's best times across all meets with sparklines
* **Improvement Rate**: Calculate percentage improvement meet-over-meet and project future performance
* **Consistency Score**: Measure variability in times (low variance = more consistent)
* **Peak Performance Predictor**: Use regression to predict when an athlete might hit their season best

**2. Comparative Analytics**

* **Peer Comparison Matrix**: Compare an athlete against teammates in same grade/division
* **Percentile Rankings**: Show where an athlete ranks within their division (e.g., "Top 15% in JV Boys")
* **Grade-to-Grade Progression**: Track how athletes improve as they move from 3rd→4th→5th grade
* **Team Depth Chart**: Visualize team's #1-7 runners and identify who's moving up/down

**🏆 Team Performance Insights**

**3. Team Dynamics**

* **Compression Analysis**: Measure the time gap between a team's 1st and 5th finisher (tight compression = better team)
* **Displacement Analysis**: Show how many runners from other teams finish between your team's scorers
* **Team Momentum**: Track if a team is improving collectively meet-over-meet
* **"What If" Scenarios**: "If Johnny improves 30 seconds, how does team score change?"

**4. Competitive Intelligence**

* **Head-to-Head Records**: Track which teams you've beaten/lost to historically
* **Rival Watch**: Compare your team vs. specific rivals across multiple meets
* **League Standings Simulator**: Project final standings based on current trends

**🔍 Advanced Statistics**

**5. Course & Conditions Analysis**

* **Course Difficulty Rating**: If you have course names, compare average times across different courses
* **Weather Impact**: If you add weather data (temperature, humidity), correlate with performance
* **Time of Season Effects**: Early season vs. late season performance patterns

**6. Statistical Models**

* **K-Means Clustering**: Group athletes into performance tiers (Elite/Strong/Developing)
* **Outlier Detection**: Flag unusually good/bad performances that might indicate injury or breakthrough
* **Race Prediction Model**: Use historical data to predict expected finish times for upcoming meets
* **Elo Rating System**: Like chess ratings, track athlete competitive strength over time

**🎯 Parent/Coach Specific Features**

**7. Goal Setting & Tracking**

* **Season Goals Dashboard**: Set target times/placements and show progress toward goals
* **Achievement Badges**: Visual indicators for milestones (e.g., "First Sub-10 minute 5K", "Varsity Letter Earned")
* **Training Impact Visualization**: If you track practice data, correlate workouts with race performance

**8. Communication Tools**

* **Automated Race Summaries**: Generate shareable reports for each athlete after a meet
* **Parent Notification Triggers**: "Your athlete just set a new PR by 15 seconds!"
* **Photo Integration**: Link race photos to results (if available)

**📈 Visualization Enhancements**

**9. Interactive Charts**

* **Race Animation**: Animated replay showing how positions changed throughout the race (if you have split data)
* **Heatmaps**: Color-coded grids showing performance across meets, divisions, teams
* **Sankey Diagrams**: Flow charts showing how athletes move between varsity/JV/frosh teams
* **Network Graphs**: Visualize competitive relationships between teams

**10. Advanced Filters & Views**

* **Multi-Meet Comparison**: Side-by-side comparison of 2-3 specific meets
* **Cohort Analysis**: Track specific groups (e.g., "All 5th graders from 2023-2025")
* **Custom Dashboards**: Let users build their own dashboard with drag-and-drop widgets

**🏅 Gamification & Engagement**

**11. Leaderboards & Awards**

* **Most Improved Athlete** (by percentage)
* **Comeback Athlete** (biggest improvement after a slow start)
* **Mr./Ms. Consistency** (lowest time variance)
* **Team MVP Score** (contribution to team success)
* **All-League/All-Conference Selections** (based on season performance)

**12. Social Features**

* **Achievement Sharing**: Generate shareable graphics for social media
* **Athlete Profiles**: Mini bio pages with stats, PRs, season highlights
* **Comments/Notes**: Allow coaches to add context to performances

**🔮 Predictive & Prescriptive**

**13. Strategic Insights**

* **Optimal Lineup Selector**: Given team roster, suggest best 7-runner lineup for scoring
* **Gap Analysis**: Identify where team is weak (e.g., "Need to improve #5 runner by 30 seconds")
* **Recruitment Targets**: If an athlete transfers, calculate their potential impact on team score

**14. Season Planning**

* **Peak Performance Timeline**: Identify when athletes typically peak
* **Injury Risk Indicators**: Flag concerning patterns (sudden drops, inconsistent times)
* **Season Progression Model**: Show ideal improvement curves vs. actual

**🎯 My Top 5 Recommendations to Start With:**

1. **Individual Progress Dashboard** - Parents want to see their kid improving
2. **Team Compression Analysis** - Coaches care deeply about 1-5 gap
3. **Most Improved Leaderboard** - Celebrates effort, not just talent
4. **Peer Comparison Tool** - "How does my child compare to grade-level peers?"
5. **PR Tracker with Goal Setting** - Motivational and actionabl