

# **AI in soccer to improve athlete performance**

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# Examples of existing AI equipment

- [Dribble up](#) (soccer ball)
- [Playermaker](#) (wearable soccer tracker)
- [Apex](#) (GPS performance tracker)



# Dribble Up soccer ball

- Live classes
- Programs
- Drills
- Progress tracker
- Leaderboards





# What Dribble Up Ball Tracks

Involvement	Technical Balance
Day Streak	Touches per foot
Leaderboards	Speed (per drill)
Live Classes	Agility (More advanced)



# Playermaker

- Soccer specific stats
  - Tracks your technical game and physical game
- Progress over time
  - Monitor the trends of your stats and see how you are developing over your last 6 sessions
- Compare and benchmark
  - Compare yourself, friends, teammates and even to the elite.





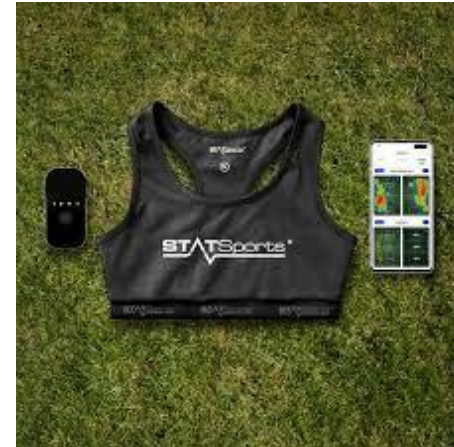
# What Playmaker Tracks

Volume	Involvement	Playing Tempo	Technical Balance	Speed
Distance Covered	Touches	One Touch	Touch by leg	Top Speed
Sprint Distance	Ball Releases	Short Possessions	Receive by leg	Sprints
Work Rate	Possessions	Long Possessions	Max. Kicking velocity	Acceleration / Deceleration



# Apex Athlete Series

- Real-time performance data that helps players become fitter, faster and perform at a higher intensity.
- Increase max speed and sprint capacity, and test stats against the pros.
- GPS tracker.





# What Apex Athlete Series tracks

Volume	*Physical Stats	Live Data	Speed
Distance Covered	Dynamic Stress Load	High Speed Running	Current Speed
Distance per Minute	Current Heart Rate	High Metabolic Load Distance	Top Speed
Sprint Distance	Max Heart Rate	Step Balance	Sprints
Work Rate	Average Heart Rate	Number of Sprints	Acceleration / Deceleration
	Calories	*Time in Red Zone	



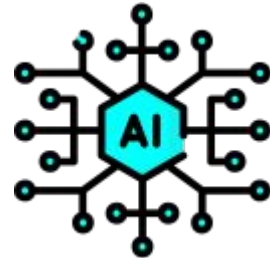
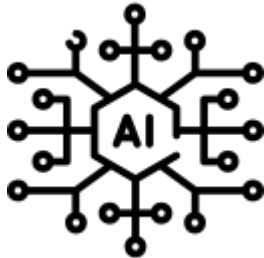


# Side-by-side Comparison

	<b>Dribble Up</b>	<b>Playmaker</b>	<b>Apex</b>
<b>Cost</b>	99.99 - 149.99	199.00 - 249.00	299.99
<b>Other Sports</b>	Basketball Med Ball Boxing	No	Football Hockey Rugby Cricket
<b>Free App Usage</b>	Yes	Yes	Yes
<b>Primary Use</b>	Interactive virtual trainer - balls	Wearable soccer tacker - on shoes	Real-time performance data - vest
<b>First Year Available</b>	2016	2020	2008

# How the Playermaker, Dribble Up Smart Ball, and Apex relate to Artificial intelligence

- Playermaker and Apex
  - When the data is collected from the sensors it is then converted uses artificial intelligence and machine learning algorithms to give stats from practices or games for coaches and players to use to get better.
- Smart soccer ball
  - Unlike the playermaker and apex the smart soccer ball doesn't have sensor with in the ball. The app on your phone scans the ball and then the app uses patterns to track the ball as it moves.



# How these improve athlete performance

Dribble Up	Playmaker	Apex
<p>Helps young players develop the skills they need to succeed out on the field.</p> <p>Repetition helps them learn fundamentals and develop the skills required, which will translate to better performance in real-life situations.</p>	<p>Data on technical ability, physical ability, and gait parameters can be gathered and processed to help players and coaches get a clear picture of skills.</p> <p>Advanced AI and machine learning algorithms are used to analyze the data, which is visualized for players and coaches to review.</p>	<p>Individual players have ability to monitor and measure their performance with data points that help them develop individual goals.</p> <p>The data helps to improve performance and identifies movement imbalances, and gives athletes coming back from injury the critical information needed to return to play with confidence.</p>



# References

*APEX Athlete Series GPS Performance Tracker*. (2021). STATSports. Retrieved October 10, 2021.

*DribbleUp Soccer(Football) App Review*. (2019, February 8). Sports Technology Bog. Retrieved October 8, 2021.

Kidd, R. (2021, January 27). *Why Playmaker Is Taking Its Soccer Technology To Amateur Players*. Forbes.

Retrieved October 4, 2021.

*Playmaker*. (2021). Playmaker Kit. Retrieved October 8, 2021.