

# Goal



- To present AI technology that I personally use and explain how it works.
- To discuss the influence of AI in baseball and how it's changing the game over time.



# **HitTrax**

- Technology that simulates hitting on the field.
- Also tracks different metrics in your swing
- Uses computer vision to track the baseball
- Has two different modes: Infrared camera (for indoor) and natural light (for indoor and outdoor)
- Through the computer vision it receives the x, y, z measurements of the baseball and then insert the data into a gaming engine.
  The HitTrax program is built in the same gaming engine and updates the virtual environment in real-time

## HitTrax

#### **ADMINISTRATOR**

#### STANDARD SERVICES



**USERS / REPORTS** 



TRAINING / CLINICS



**GROUPS** 



**QUALITY HIT GAME** 



**CATCHING MODULE** 

#### SUBSCRIPTION SERVICES



**VIDEO REVIEW** 



**BASELINE ASSESSMENTS** 



**PLAYER RANKINGS** 



**PELOTERO** 

## Support for Multiple Video Cameras

Capture the event from any angle as the software now supports connectivity of up to 3 cameras.

Set up to 3 video cameras at different angles (i.e. front facing and overhead) and toggle between views directly within the HitTrax program. The selected camera will then capture the event for immediate playback.



Account Management (Premium Subscription until 6/1/2022)











### TRAINING / CLINICS



TRAINING SESSION



CLINICS



FINISHED CLINICS









### TRAINING SESSION

All	Baseball Fastpitc	h Slowpitch		٩
First Name	▲ Last Name	Game	Level	
Greg	Gomez	Baseball	College	7 0
Hayden	Hargrave	Baseball	College	<b>* \</b>
Haydn	Finley	Baseball	College	1
Heath	Stuckey	Baseball	College	1
Hunter	Wojcek	Baseball	College	1
Huter	Perkins	Baseball	College	1
Jack	Milner	Baseball	College	1
Jackson	McDonald	Baseball	College	%
Jake	Michener	Baseball	College	<b>%</b>
James	Gilfedder	Baseball	College	1
Jared	Benham	Baseball	College	1
Jasmine	Carlos	Fastpitch	College	1
-			- "	

Players

Hakeem Yatim

Play Ball

Cancel

 $\otimes$ 



## Blast Baseball



- A sensor that can be attached to the knob of the bat to recreate your swing in a virtual world
- Also tracks different metrics of your swing
- Uses low energy bluetooth to transmit metrics to your phone/tablet



# Personal experiences



- Both Apps were useful in terms of tracking trends of my swing metrics
- Does it change how I play the game? nope.
- Overall, these are useful tools to track progress or development, but one thing they can't do is improve a player's game sense.

# Al Impact on the Baseball Business

- Scouting players become data driven.
- Tracking trends of performance helps professional clubs to maximize the efficiency of the players (minimizing injuries, choosing players to start based on their performance trends, etc.)
- Building a roster based on trends of potential players' performances
- Does this mean the excitement of the game is gone?



# **Works Cited**



John Sturdivant (October 23, 2020) Building the Al-Driven Baseball Analytics Team. online: datarobot.com

Carlos Garcia (September 24, 2020) How Professional Baseball is Using Artificial Intelligence. online: itsgame7.com

Tom Kelly (n.d) What Major League Baseball Can Teach Us About AI in Business. online: netsuite.com

Mike Donfrancesco, HitTrax (2011). online: hittrax.com

Blast Motion (2014). online: blastmotion.com

Claudio Silva (October 11, 2016) Deep Learning, AI, and Analytics for MLB Baseball. online:youtube.com

Gartheeban Ganeshapillai, John Guttag (2014) A Data-driven Method for In-game Decision Making in MLB. online:github.io

Tatsuya Ishii (2016) Using Machine Learning Algorithms to Identify Undervalued Baseball Players. online: stanford.edu