Object Detection, Tracking, and Path Tracing

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Goals

- Detect selected players in sports videos
- Track their movement
- Trace the trail of their movement on screen

Background

- Many programs do each of these individually (track, or trace)
- Most either only trace selected, or track all objects on screen
- Python & OpenCV used
- Used YouTube-8M database for videos:

https://research.google.com/youtube8m/

Box Tracker Only



Live Demo

Problems

- Tracing only selected box.
- Runtime
- Player collisions
- Camera Movement

Ideal Outcome



Conclusion

- Got individual tasks working
- Couldn't properly link them
- Learned a lot about CV, OpenCV, and Optical Flow
- Enjoyed the challenge

Questions?

• Thank you!