



# Rocket League AI Coach & Assistant

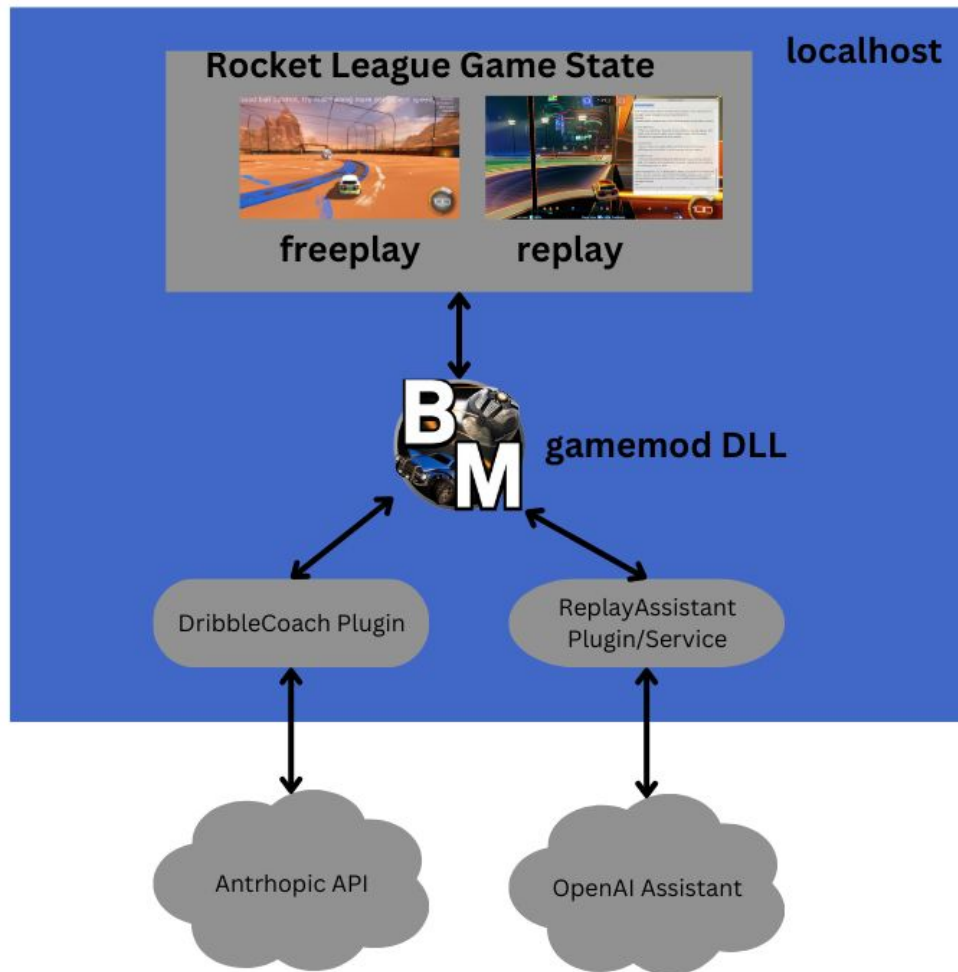
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# Rocket League

a fast-paced game of 'rocket cars playing soccer' that demands quick reflexes, precise control, and strategic team play  
1v1, 2v2, 3v3, 4v4 and various other game modes.





This project explores two primary approaches to integrating game mechanics with AI:

- **Mechanics Feedback:** Anthropic's Claude Sonnet 3.5 model was used to provide feedback on player mechanics during freeplay.
- **Replay Prompt:** OpenAI's 4o Assistant API was used for a replay prompt during replays.

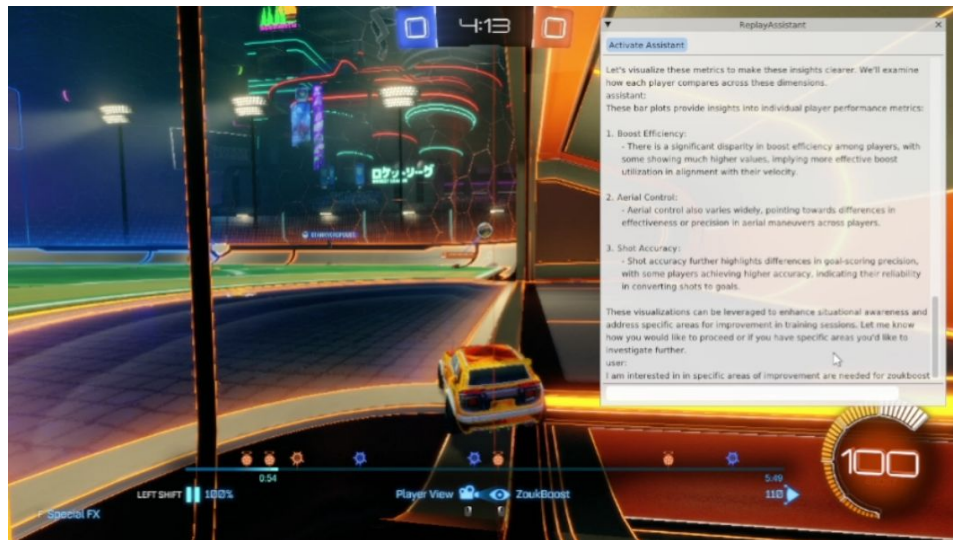
# DribbleCoach: Mechanics Feedback

- Description:
  - Identifies and tracks the mechanical skill of ground and air dribbling.
  - Offers simple suggestions on optimal timing, positioning, and ball control.
- ToDo:
  - Fine-tune air dribbling tracking.
  - Provide flick feedback.



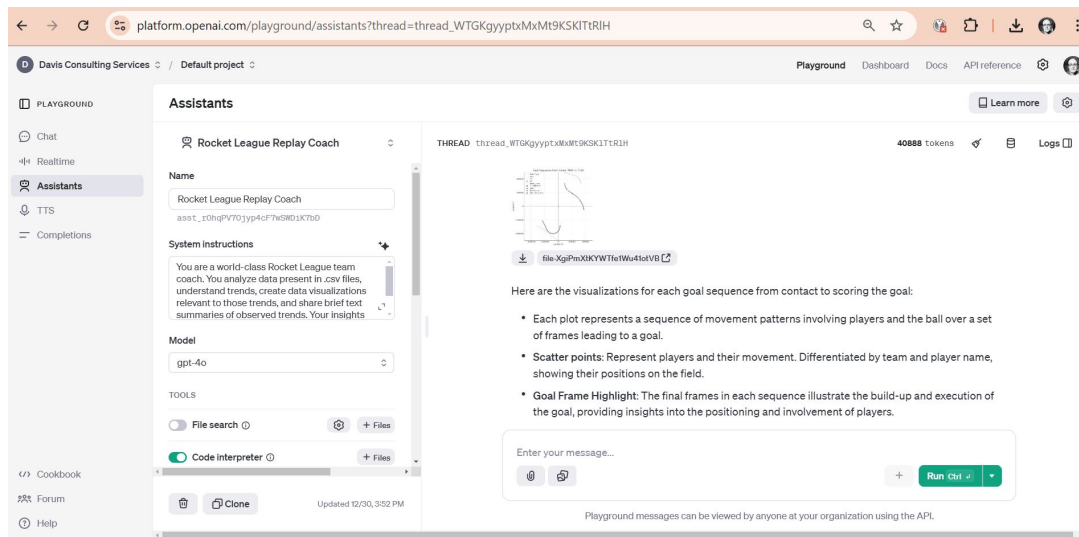
# ReplayAssistant: Replay Prompt

- Description: Extracts replay data and creates an OpenAI assistant prompt available on the current replay.
- Todo: Images, better rendering in prompt



# ReplayAssistant: OpenAI Assistants Playground

<https://platform.openai.com/playground/assistants>



The screenshot displays the OpenAI Assistants Playground interface. On the left sidebar, the 'Assistants' tab is selected. The main panel shows an assistant named 'Rocket League Replay Coach' with the ID 'asst\_r0hgPV70jyP4cFhG8DxK7bD'. The system instructions state: 'You are a world-class Rocket League team coach. You analyze data present in .csv files, understand trends, create data visualizations relevant to those trends, and share brief text summaries of observed trends. Your insights'. The model is set to 'gpt-4o'. Below the model, there are options for 'File search' and 'Code interpreter', both of which are currently disabled. A 'Clone' button is visible at the bottom of the assistant configuration. The right panel shows a thread titled 'THREAD thread\_WTGKgyyptxMxM9KSKITRIH' with 4088 tokens. It contains a visualization of a goal sequence, showing a scatter plot of player positions and a goal frame highlight. The text below the visualization reads: 'Here are the visualizations for each goal sequence from contact to scoring the goal:'. Below this, there are three bullet points: 'Each plot represents a sequence of movement patterns involving players and the ball over a set of frames leading to a goal.', 'Scatter points: Represent players and their movement. Differentiated by team and player name, showing their positions on the field.', and 'Goal Frame Highlight: The final frames in each sequence illustrate the build-up and execution of the goal, providing insights into the positioning and involvement of players.' At the bottom of the right panel, there is a text input field 'Enter your message...' and a 'Run Chat' button.



# Live Demonstration



# Thank you!

Source code for presentation

<https://github.com/scottleedavis/ai-portland-rocketleague/>

Acknowledgements

<https://IndrIndr.github.io/Contact/> - (Creator of CARL) Indr has been helpful with Positive Feedback and Criticisms of this project.