



GPT-2 Jomboy: Can AI produce exciting Baseball content?

By Teddy Kamin with help from Jon Chun and Katherine Elkins
Kenyon College IPHS



Introduction

Baseball had been long marketed as “America’s national pastime,” and among the ranks of apple pie and the 4th of July in all things good and pure about America. Recently, baseball has started to become an afterthought for American sports fans. The MLB is a joke in comparison with the other major four sports in the US. Baseball fans are dwindling because of the game’s slow pace, arcane blackout policies, and poorly marketing stars. This past season MLB attendance hit a 37-year low. This didn’t just result in fewer fans at ballparks, but also viewership was down 12% compared to 2019 [1]. Coming off a lockout this 2021-22 offseason has once again put baseball in the bad graces of the public with owners and players being portrayed as stubborn. Baseball fans have been long enraged with the MLB’s molasses-like approach to changing their league towards advancement and out of the dark ages. In the social-media age, baseball is in the middle of a crisis given the fierce competition for viewers attention.

Jimmy O’Brien is the founder of Jomboy Media one of the most listened to and followed baseball media personalities. O’Brien is at the front of a push to make baseball fun again. In 2017, he created the podcast “Talkin’ Yanks” with his friend Jake Storiato. He was able to build a following of Yankees faithful who would listen to his comedic insights on the Bronx Bombers. O’Brien struck gold in July 2019 when he did a breakdown video of Yankee’s manager Aaron Boone’s argument with umpire Brennan Miller. O’Brien was able to lip-read Boone using the phrase, “my guys are f**cking savages in that f**cking box” referring to his player’s batting approach [2]. This video went viral beyond just the Yankees faithful. The legend of Jomboy was born.

Another one of the major issues the MLB has faced that Jomboy hit the mark on was the Astros cheating scandal. The Houston Astros won a world series in 2017 using a camera to steal signs from the other team and know what they were doing. This created a lot of questions around the league for fans and the legitimacy and integrity of the game. Jomboy led the charge against the Astros and the MLB. He was able to uncover video evidence of the Astros using a trash can to alert hitters when an off-speed pitch was coming. O’Brien’s snarky commentary and his ability to never pull punches are beloved. He was able to gain a mass following by breaking down baseball’s best characters and putting them on display for the world to see. If you want to introduce someone to the beauty of baseball you show them Jomboy. I thought it would be fitting to use the magic of GPT-2 to see whether bringing more great personalities like Jomboy into the game of baseball could help remind viewers of the great old broadcasters like Harry Caray, Vin Scully, and Howard Cosell who were such colorful characters they kept listeners around the

Methodology

In order to generate text in Jomboy’s style, a 355M-sized GPT-2 model was fine-tuned on a corpus of all of his “Baseball Breakdowns” from- 2019-2022. He would post a video of length ranging from 2 minutes to 6 minutes about a game from the previous night in the world of baseball. There were 720 videos incorporated into the training dataset.

The first step of getting the text was scraping the transcripts from all of the videos from Jomboy’s YouTube channel. This was performed by Professor Chun using a notebook meant to get text from auto generated transcripts on YouTube videos.

During fine-tuning, the GPT-2 model was trained on the Jomboy transcript dataset for 5,000 epochs. The GPT-2 model learned Jomboy’s style of breaking down a baseball game in a hilarious and intelligent manner. Following this, the model used its understanding of the patterns contained in human language combined with the specific speaking style of O’Brien. Then the model was given free reign on what to write about. In the future, I would like to give the model specific prompts of the daily happenings of baseball.

There were two different groups of the generated text. The first was trained at a temperature of 0.9 which results in more randomness. The second batch of text was trained at a lower temperature of 0.7 generating a more conservative remix of the original text. The two different temperatures were used to see how entertaining the models could be without going completely off the deep end.

What is GPT-2?

GPT-2, created by OpenAI, is a transformer-based language model with 1.5 billion parameters, and it has been trained on 8 million webpages with the goal of accurately predicting the next word in a piece of text, given all the previous words in that text [3]. This goal makes GPT-2 capable of completing various tasks: It can answer questions about the content and comprehension of texts, summarize, and translate. It can also generate synthetic texts in which it mimics the style and content of a given input [3]. In order to mitigate possible malicious use and provide additional time to analyze the implications of releasing GPT-2 1.5BM, OpenAI is taking a staged-release approach, with the most powerful version currently available being GPT-3. In addition, GPT-2 outperforms other language models trained on specific domains (like Wikipedia, news, or books) without needing to use these domain-specific training datasets. On language tasks like question answering, reading comprehension, summarization, and translation, GPT-2 begins to learn these tasks from the raw text, using no task-specific training data.[3]

Metrics

Baseball Vernacular-Jomboy’s signature style is to make baseball entertaining while still giving good insight on the game.

Lip Reading -Jomboy is a master at reading the lips of players in the dugout and giving the viewer descriptions of what is going on in players heads and facial expressions.

Wry Humor -You could always find yourself laughing out loud at the end of a Jomboy video, and it is because he is very witty and doesn’t try too hard with his humor.

New York Yankees Fandom- Jomboy is a Yankees fan and that is a big part of his web persona always pulling for NYY and talking trash about their rivals.

Active Verbs- Jomboy is able to keep the viewer engaged by his exciting descriptions of the game using descriptive verbs.

Results

Best Results

- “we had a relief pitcher hitting in the Braves game tonight Dan Winkler steps in the plate says I’m about to bunt on your asses here we go he’s all giddy smiley it’s a second ever played appearance in his career turns to bunt gonna lay this baby down oh my god oh oh oh oh safe safe and safe what the [_] was that almost a little personal to you”
- “all right I did my best to find out what Boone was saying when he got it ejected here you got to know going into this that Boone hates replay because they messed him up on the Glaber call a couple games back they messed him up earlier in this game”
- “wild game between the Nationals and Brewers last night and that lady was zonked up in the front row just sleep in her pretty little head Haders gonna work himself into and out of trouble and blow the lead at there it is she’s just sleeping”

- “UMP calls it a strike he’s not happy about it shaking his head in disbelief and then the next one he’s dipping and dodging him can’t do it can’t get him up just whips it finally get him good job there good job”

Worst Results

- “Castsesesesesesesesesesesesesesesesesesese loop comes up as the next pitch is like really really okay what are we doing when we get a hitsesesesesese we’re going to a second swing off light he’s like okay oh and do this and here we go oh and he’s like I know what this lookese was Isesesesesese we’re going to lose this game and then he gets runseck up on that when he thinks he canseco and ifsesesesesesesesesesese’s okay next pitch Isesesesesese”
- “CC Sabathia will be in the Hall of Fame if you try to fight that you’re just being ignorant to the stats only 17 players have 3000 strikeouts he has the third most strikeouts for any lefty to ever pitch in the MLB 250 wins and for a good chunk of a decade he dominated his position and on this pitch right there he dislocates his shoulder and this is his last appearance as a Yankee as a pitcher”

Conclusion

O’Brien’s ability to break down the most interesting or exciting thing to happen in a baseball game—a game-winning homer, a manager exploding at an umpire—has changed the trajectory of baseball media. His content is a grand slam helping show audiences the best of baseball.

Unfortunately, the MLB has tried to strike down some of the videos from Jomboy Media. Another display of the MLB not being able to market their game effectively in the social media era. “The point isn’t that they’re wrong or being bullies, the point is that they’re dumb for not seeing us as free marketing,” O’Brien tweeted. “I get the copyright, but this is just another in a long line of actions where MLB makes its content that much more inaccessible to the audience it directly needs to capture [4].” O’Brien hit the nail on the head with this tweet. Jomboy is giving the MLB free coverage and a direct path to younger audiences. The league is foolish to prioritize a tiny amount of its revenue stream coming from licensing game footage over the growth of the game.

Personalities like O’Brien are the perfect gateway for fans to learn to love baseball. GPT-2 trained on the Jomboy baseball breakdowns might not be the same level of entertaining without the in-game video, added subtitles, or manipulated audio, but GPT-2 Jomboy is still a hit out of the park.

In the samples, the first metric I was interested in seeing was whether the generated text would have been able to be entertaining and even remotely resemble the hilarious breakdown videos Jomboy is known for.

In the first sample, the text really painted a picture of what was going on in the game facial expressions and all. Even the way that it emphasized “oh” and “safe” in the text made it similar to the way he would narrate a dramatic bang-bang play. All this while including an expletive made it a classic Jomboy breakdown sequence.

In the second sample, I found a signature case of Jomboy attempting to lipread an ejection of a manager. GPT-2 was able to accurately describe a moment of a manager getting ejected in a game even referencing frustration with replay mechanisms. This is completely believable that this could be a real breakdown video.

In the third sample, AI-Jomboy created this wild scenario in which a fan was asleep in the front row of a game. All while describing what was going on in the Nationals and Brewers game it seamlessly was able to crack a joke at a fan. The silly things like this remind fans that baseball is just a game at the end of the day.

In the final positive sample, the description of a bad ump call is done well because of the verbiage used. Jomboy is always able to keep the viewer engaged by so accurately describing the player’s actions in-game. Using words like “dipping” “dodging” and “whips” can give such a good visualization without any video being paired with these text samples.

Finally, the only two issues that I was able to find were when GPT-2 would get confused with some of Jomboy’s vocal tricks. In sample five, the repetition of “se” is redundant and was not anything Jomboy like to the point it didn’t make sense. Also, certain samples directly got copied over from the YouTube transcript. This could have been avoided if a prompt was given to the model and giving it something specific to comment on.

Overall, I think that GPT-2 was pretty effective at replicating Jomboy. It was able to grasp what makes Jomboy so unique and entertaining. The humor, baseball insight, and lip-reading abilities were spot-on without a video present to aid his commentary. I would like to further use AI to bring the best personalities and ambassadors of baseball back to life. Beyond being able to recreate the text of the baseball commentators it would be best to pair their iconic voices with the text. So much of the lore behind the great broadcasters was with their legendary cadences during the biggest moments in sport. Being able to pair together with the voice with the text of former broadcasters with the plays of today would be a very cool concept that would be appealing to modern-day viewers.

Sources/Acknowledgements

- [1] https://www.youtube.com/watch?v=IbSfJLF_0-8
- [2] <https://www.youtube.com/watch?v=M2XNW1qHN9w>
- [3] <https://openai.com/blog/better-language-models/>
- [4] https://twitter.com/Jomboy_/status/1199777722777526272

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