Introduction

We are @rororowyourboat and @akrtws from the Token Engineering Academy's cadCAD GPT initiative. Over the last months, we've developed an open-source framework to support token system simulations with LLM agents (Large Language Model agents).

More about cadCAD GPT:

Github: GitHub - TE-Academy/cadCAD-GPT

Mirror: Hello, cadCAD GPT! — Token Engineering Academy

Demo session: [https://x.com/tokengineering/status/1730516745654251787?s=20

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While working on cadCAD GPT, we realized that there's huge potential to utilize such agents for better, faster, and more data-driven decision-making in DAOs.

The major benefit of such agents is that they allow us to interact with system models, data, and code in human language

.

This way, it enables DAO decision-makers from multiple backgrounds and perspectives to run data analysis, and even the most complex simulations without writing code.

Demo MVP

To show the potential, here's a short video, demoing RetroPGF GPT.

[

](https://www.youtube.com/watch?v=QcvKdu7kax4)

In the video, we present use cases to give you a picture of how powerful AI agents are, and how they can support RetroPGF:

- analyze RetroPGF voting outcomes and compare metrics (like discussedhere, great comparison by @Pr0)
- create new data sets, and charts, summarize and export for further usage
- develop new metrics with AI support
- assess results from a badge holder point of view (my voting vs. total badge holder voting)

This is just a small sample of what AI agents can do for RetroPGF.

There's much more:

- During RetroPGF rounds:

support badge holders in evaluating grant applications

- After RetroPGF rounds:

find flaws or vulnerabilities in the voting or distribution process

- Improving RetroPGF:

compare different voting mechanisms and evaluate pros/cons (like discussedhere, awesome analysis @amy @ccerv1 !)

A suite of AI agents for Optimism Retro PGF

Note that the agents in the demo video shared are made usingGPT Builder, a closed-sourced tool by OpenAI. It makes building MVPs super simple and efficient. We've equipped our GPT in the demo with RetroPGF raw data available here, and only made some minor tweaks, like adding a fictional badge holder voting ballot.

However, we aim to build a suite of LLM agents customized for Optimism RetroPGF

:

- Equipped with an ever-growing set of tools and information

that are particularly relevant for Optimism RetroPGF

- Open-source

as much as we can, and as much as the Optimism Collective is willing to open-source (we understand that some information or tools should not be public, like the voting behavior of individual badge holders)

- No OpenAI lock-in

. Modular framework to integrate LLMs, so that we can either use OpenAI (most powerful today), or switch to alternative, open-source large language models like LLaMA2 or Falcon in the future (yey!)

- Modular framework

on the tool side, so that more sophisticated metrics and models developed by Impact Data Scientists, can be integrated as Python plug-ins

- Inform the RetroPGF data creation/collection/cleaning/pre-structuring

process so that raw data (such as project applications for OP RetroPGF) is optimized for LLM agent consumption

- Train users

, such as badge holders, to use and make the most of AI agent support

Next step: Building first tools for badge holders supporting RetroPGF round 4

AI-powered DAO governance has enormous potential. Currently, several DAOs are exploring the application of AI to their decision-making process. With RetroPGF, Optimism would be definitely at the cutting edge. It is a true moonshot!

But let's be honest, AI-powered RetroPGF is a huge endeavor, too.

So let's start with an actual use case, and provide value: We'll build the first LLM agents to support badge holders in RetroPGF round 4.

Our main questions:

What's the most pressing need for assessing RetroPGF applications for badge holders? How to best integrate voting improvements discussed in the community?

We'd like to talk to the OP collective to put together a scope and requirements to ensure problem-solution fit. If it's a fit, we'll submit a mission application in Season 6.

If you are a badge holder

, and interested in becoming an alpha user, drop us a line!

If you are a data scientist

and want to make your analysis accessible through AI agents, contact us!

Here's a Calendly link to book an onboarding call for alpha users / data scientists: Calendly - TE Academy

Also @Jonas , we need input regarding raw data access in round 4, who to best talk to?

And everyone, if you have any questions regarding this proposal, shoot away, we'll be happy to discuss!

Thank you!