

Feature Track: AskCo19.com by Nth Opinion

The Decentralized AI Alliance, under leadership of SingularityNET and Ocean Protocol, has launched a major developer event to extinguish the threat of the COVID-19 pandemic and end social isolation using a state-of-the-art full stack AI solution that their team has developed on a decentralized protocol. Hosted by DAIA, SingularityNET, Ocean Protocol and NthOpinion are teaming up to launch a global hackathon, named CoVIDathon, online with multiple tracks for developers to participate. In this proposal, NthOpinion has outlined a theme for the Informational and Coping Tools track which will feature the development of a distributed AI interface for frontline providers utilizing televideo, tokenomics, and machine learning in a simple interface for frontline providers to share awareness about Covid-19 and personal experience and foresight for people yet to face the virus in real-time.

The Challenge

- Create an interface whereby a frontline physician can interact with his own AI: Incorporate algorithms formally trained to be utilized for (physician trained and owned algorithms)
- Implement the NTO ERC20 token as an “opinion” token for punishment/reward in a reinforcement learning system

Join our Github

- <https://github.com/nthopinion/covidathon>

Join our Slack

- <http://bit.ly/hackingcovid19-slackinvite>
- bit.ly/SNET-AskCo19-Slack

Context

- Nth Opinion open sourced a project originally envisioned to be an AI Physician platform that would be decentralized and borderless to help people answer their concerns about their conditions and diseases 24 hours of the day without the need for a physician.
- In the emergence of a lethal and unknown viral pathogen, SARS-COV-2, Nth Opinion saw the advantage of its system to give people around the world advanced warning by frontline physicians to begin to prepare for the oncoming surge and onslaught of the pandemic of COVID-19. The spread of the virus rapidly outstripped the resources of one company and that was when their team turned to the open source community as a call to action. With SARS-COV-2 spreading at a frightening pace, the open source community answered the call and fought back with amazing clarity and force. Members of the open source community, each with their unique talents, applied their skills to challenge this global threat in our hackathon event, [Code vs COVID-19](#) and produced a platform that the community has called [AskCo19.com](#).
- Without a cure or any research, the advance warning of people and physicians on the frontlines with their awareness, personal experiences, and suggestions become the only advantage that people, yet to face the surge and onslaught of COVID-19 in the midst of the pandemic, can use against a lethal and unknown viral pathogen.
- The QnA style design is intentionally done to produce a natural UI/UX that will facilitate a physician-patient experience that can be scaled to an application for patients around the clock. The structure lends itself extremely well to creating a high quality simple NLP dataset that AI/ML and Reinforcement Learning can use to create a reward structure to enable training and the introduction of a trainable action space that will optimize

answers to questions about treatment options, experiences, and advices which could improve over each iteration/epoch.

- In real-time, users become the environment and the RL agent optimizes over every decision as steps.
- The agent works in shadow-mode, coined by Tesla, until its accuracy exceeds the threshold that will be acceptable clinically.
- To promote engagement, we are encouraging the use of a utility token to incentivize the physician and patient experiences either separately or during their encounters. Tokens may be used, earned, or burned based on participation.
- To facilitate dataset growth, we will enable telemedicine as a way to create engagement and promote the use of the platform for which questions can be asked during the patient-physician encounters that are not answered or still need answering.

Impact

- COVID-19 has shut down clinics around the world and, without access, patients no longer have access to their medical providers. AskCO19 immediately fulfils this need during the time when a pandemic has crippled the system that was intended to help the patients that are most affected by it.
- Until now, health care systems have been falling far behind in technological advancements leading to widespread inefficiencies in communications with and between healthcare workers and patients. As a result, it has become ill-equipped to handle emerging infectious diseases, particularly COVID-19 with pandemic effects. This has resulted in

desperate efforts to advance its technologies and policies. Nth Opinion has been ahead of the curve and has developed a full stack solution for physicians two years in advance.

- Deployed and open sourced weeks before the pandemic, AskCo19 now is the main platform for over 200 developers to unite against a biological agent that threatens our existence and will not wait for us to stop it.
- The only advantage that people have is the advance warning from people for people. A virus that spreads with an Ro of 2-3 is exponential and, in our globally-connected world, has no borders. As a technological species, humanity will decide its fate with our advances in global communication, decentralized technologies, self-adaptable, self-learning, and potentially superhuman algorithms.
- Once decentralized, it will continue to gather knowledge and improve treating and finding new solutions for new diseases as they emerge in a borderless and permissionless way.

A successful team will

- Work well with the open source community to rapidly advance features with laser sharp focus to extinguish COVID-19 and advance the AI/ML and RL physician algorithm
- Port features that are well-suited onto SingularityNET's decentralized protocol
- The development of the first AI Solution that will become aware of and self adapt to threats from any emerging infectious disease to be able to significantly cripple a fast-moving, self-adapting, and highly dangerous infectious biological pathogen as it emerges and prevents pandemics.
- Deploy blockchain technology through the use of a smart contract / utility token

- Be the proof of concept that a decentralized AI solution can not only monitor for the emergence of rapidly spreading, dangerous infectious diseases, but can also be the solution to extinguish them before significant mortality and morbidity occurs with implications for a borderless and permissionless solution to protect every person in the world.