Call for Experts to the Project Resilience MVP Working Group

Group:	Project Resilience, AI for Good
Working Group:	MVP
Type of Experts:	Architect, DevOps, Machine learning modeler, UX Developer, Technical Writer
Types of Engagements:	Core leadership team, Voluntary basis
Duration of engagement:	February 2022 – December 2022 (estimated)
To express interest:	https://www.research.net/r/PRWG1MVP0122
For more information:	Contact: pr@ai-commons.org

Background:

The global pandemic of 2020 impacted the world in many unexpected ways – demonstrating that we need increased readiness to respond to global risks and to be able to help society support its normal function while safeguarding everyone. The collaboration between XPRIZE, Cognizant, ITU, and Oxford University via the Pandemic Response Challenge demonstrated how we could convene a group of experts – data scientists, epidemiologists, public health officials, to build a useful set of tools to advise us on how to cope with and plan around a health disruption to society. In order to continue the work, we are initiating a collaborative effort named "Project Resilience". Our vision, in the continuity of efforts towards AI Commons, is to create a public AI utility where a global community of innovators and thought leaders can enhance and utilize a collection of data and AI approaches to accelerate the United Nations sustainable development goals. Project Resilience is recruiting volunteers to deliver the MVP platform that will enable collaborative AI models for many future use cases.

Experts to serve in the core leadership team will drive the strategy and execution of the MVP platform. This group of experts will be comprised of multiple types of experts, including the following roles: Architect (lead), Architect (support), DevOps, Machine learning modeler, UX Developer, Technical Writer. Experts who serve in the larger working group will support the development of the MVP platform under direction from the leadership team.

Experts needed:

1. ARCHITECTURE AND DEVOPS

Areas of expertise:

- Expertise in design and implementation of machine learning based systems and workflows in web portal
- Expertise in design and implementation of APIs Expertise in data engineering and processing model input/output data
- Expertise in cloud and containerized computing for portal and automated assessment
- Expertise with storage and compute requirements for ensembling and assessing models
- Expertise in AI/ML modeling and data standards (input and output)

MVP responsibilities:

- Build API and design specifications, including format of data, where query will be hosted to support API query, and ongoing API maintenance
- Build framework for operationalizing ensemble model in web portal
- Determine requirements for storage and compute needed for ensembling and assessing models for future use cases
- Determine, implement, and govern storage for input, output, and model
- Create policies on end user access, configuration, and versioning
- Provide API calls and requirements for end user interface

2. MACHINE LEARNING MODELERS

Areas of expertise:

- Expertise in data science, statistics, machine learning
- Expertise in ensemble models
- Background in optimization, operations research, Bayesian inference, or modeling prescriptors
- Required fluency in python programming language with background with tensorflow, pytorch, and similar packages
- Expertise in machine learning model validation and assessment
- Experience in implementation of machine learning models in API-based workflows
- Experience in data engineering and processing model input/output data

MVP responsibilities:

- Create ensemble model based on a set of identified models, expanding as use case is refined
- Develop, test, optimize module to assess submitted models by making calls to models hosted by 3rd parties or submitters
- Develop, test, optimize code to compare submitted models and produce set of performance metrics
- Develop, test, optimize code to conduct ensembling of submitted models
- Develop, test, optimize code to operationalize ensemble model in UX (Predictors: take context + actions as input, predict outcomes; Prescriptors: take context as input, prescribe actions optimizing desired balance of outcomes)

3. UX DEVELOPER

Areas of expertise:

- Expertise in design and implementation of web portal for machine learning model assessment and validation

MVP responsibilities:

- Responsible for design, implementation, and maintenance of web portal for assessing submitted models, comparing, reviewing KPIs

4. TECHNICAL WRITER

Areas of expertise:

- Expert fluency in formal and technical English language
- Familiarity with AI/ML, model operations, API, and modeling frameworks

MVP responsibilities:

- Write guidance for 3rd parties on data and model submission requirements and format for context, action, outcomes column
- Write guidance for 3rd parties on model versioning and lifecycle standards and considerations
- Write guidance for 3rd parties for using API
- Write guidance for post-MVP team for scaled data requirements
- Write overview of MVP launch for public socialization