LF AI & Data Foundation Technical Advisory Council (TAC) Meeting Minutes
June 15, 2023 (6:00am - 7:00am PST) via Zoom

TAC Meetings are bi-weekly and open to everyone in the LF AI & Data community.

Voting Notes
Under the original charter rules we need 50% attendance from the voting members (represented by premier members + graduate projects) to meet quorum. To ensure quorum is met more consistently, the TAC implemented the following attendance and voting eligibility rule effective Dec 1, 2022: Voting members of the TAC who miss 2 consecutive meetings will not be allowed to vote and must then attend 2 consecutive meetings before their voting privileges are reinstated.

With the new attendance and voting rule adopted by the TAC, the number of eligible voting members varies per week and is tracked here. Please see meeting minutes on the TAC Wiki for details on attendance and voting eligibility on a per meeting basis.

Please see the TAC Wiki for more information about voting.
Please see current voting members, including alternates, on the TAC Wiki.

Voting details for today's meeting: 6 voting members were eligible to vote and 8 voting members were in attendance. Quorum was met for this meeting.

TAC Voting Member	Voting Representative	6/15/2023
Quorum	**Attendance/No. Eligible Votes**	0.8
4paradigm	Zhongyi Tan	Jerry Tan
Baidu	Jun Zhang	Jun Zhang
	Alternate: Daxiang Dong	
	Alternate: Yanjun Ma	
Ericsson	Rani Yadav-Ranjan	
Huawei	Howard (Huang Zhipeng)	
	Alternate: Charlotte (Xiaoman Hu)	
	Alternate: Leon (Hui Wang)	
IBM	Susan Malaika	Susan Malaika

	Alternate: Manish Nagireddy	Manish Nagireddy
Nokia	Michael Rooke	Michael Rooke
	Alternate: Jonne Soininen	
OPPO	Jimmy (Hongmin Xu)	
SAS	*Nancy Rausch	Nancy Rausch
	Alternate: JP Trawinski	
ZTE	Wei Meng	Wei Meng
	Alternate: Liya Yuan	Liya Yuan
Adversarial Robustness Toolbox Project	Beat Buesser	Beat Buesser
	Alternate: Kevin Eykholt	
Angel Project	Jun Yao	
Egeria Project	Mandy Chessell	
	Alternate: Nigel Jones	
	Alternate: David Radley	
	Alternate: Maryna Strelchuk	
	Alternate: Ljupcho Palashevski	
	Alternate: Chris Grote	
Flyte Project	Ketan Umare	
Horovod Project	Travis Addair	
Milvus Project	Xiaofan Luan	
	Alternate: Jun Gu	
ONNX Project	Alexandre Eichenberger	Alexandre Eichenberger
	Alternate: Jim Spohrer	
	Alternate: Prasanth Pulavarthi	
	Alternate: Andreas Fehlner	Andreas Fehlner
Pyro Project	Fritz Obermeyer	

Note for Voting Members

Please ensure you attend the bi-weekly TAC meetings to maintain voting eligibility. If you have not already provided an alternate representative, please email Nancy Rausch (Nancy.Rausch@sas.com), TAC Chair AND operations@lfaidata.foundation to designate an alternate representative. It is critical to meet quorum during the meetings especially when there are voting items on the agenda.

LF Attendees
Ibrahim Haddad, Executive Director, LF AI & Data
Lucy Hyde, Program Manager, Linux Foundation
Reden Martinez, Project Coordinator, Linux Foundation
Nora Anwar, Marketing Manager, Linux Foundation

Invited Guests/Presenters
Koji Yamamoto
Masatomo Goto
Inakoshi Hiroya
Hiro Kobashi
Takao Mohri
Ken Komiyama
Kosaku Kimura
Nakashima
Fukuyori
Jigisha Mavani
Manish Nagire
Ali Hashmi
Stephen Kwan
Suparna Bhattacharya
Ofer Hermoni

Call to Order
Nancy Rausch (NR) called the meeting to order at 6:01am Pacific and Lucy Hyde (LH) recorded the minutes.

NR reviewed the antitrust policy notice.

Agenda

Nancy Rausch (NR) reviewed the agenda for the meeting. There were no further changes or additional topics added.

- › Roll Call (1 mins)

- › Approval of Minutes from previous meetings (2 mins)

- › Intersectional Fairness Technology Presentation / Ethical AI Project (40 mins)

- › Open Discussion

Approval of Minutes

Nancy Rausch (NR) presented a resolution to approve the minutes of the June 1, 2023 TAC meeting.

Proposed Resolution:

That the minutes of the June 1, 2023 meeting of the Technical Advisory Council of the LF AI & Data Foundation are hereby approved.

Michael Rooke made the first motion to approve the minutes, and Alexandre Eichenberger seconded the motion.

APPROVED - By vote of the TAC, the minutes of the June 1, 2023 meeting of the Technical Advisory Council were approved.

Foundation Update
Ibrahim Haddad (IH), Executive Director of the LF AI & Data Foundation provided updates on the Foundation. IH discussed …

EthicalAI from Fujitsu, new Sandbox project proposal

Nancy Rausch welcomed Koji Yamamoto (KY) from Fujitsu. KY gave an introduction to Intersectional Fairness (ISF) Technology, discussing existing tools over recent years. KY provided an overview of fairness and quantification using the Disparate Impact (DI) and explained the motivation for Intersectional Fairness. KY explained that ISF can address diversity-accounted fairness in addition to fairness under laws (e.g., employment law) and can respond to social

demands. KY defined the loss of fairness at the intersection, where combining multiple sensitive attributes can cause unfairness, even if each individual attribute does not cause any unfairness.

KY provided an example of an intersectional fairness violation (U.K. passport system).

KY stated that the ISF method adopts a conventional approach to mitigate and measure bias in single attributes and extends it to intersectional bias mitigation. KY explained that it utilizes three types of mitigation methods (pre-, in-, and post-processing mitigation) and demonstrated how developers should follow typical training/fitting and prediction steps. ISF calculates scores by using models trained with combined groups of the target-belonging group and each of the other groups. Subsequently, ISF integrates the calculated scores to generate the final individual judgment. The technically challenging aspect lies in score integration. ISF obtains prediction models for all pairs of subgroups, focusing on pairs related to the target, and arbitrates these scores using a threshold determined by learning-time accuracies. As a result, ISF achieves improved fairness and accuracy. Experimental results with GerryFair (GF) showed that ISF achieved high accuracy.

KY provided a roadmap and summary, discussing technical considerations such as enhancing the tradeoff between accuracy and fairness, expanding the range of input data types, and improving performance. Regarding activities, KY plans to publicize ISF as a project, promote LF and ISF initiatives, and support more practical use cases. KY concluded that ISF enhances fairness by addressing the intersections of sensitive attributes, treating all subgroups equally, and fostering trustworthiness in practical machine learning applications. KY also mentioned the potential integration of AI Fairness 360 to aid in detecting and mitigating bias in machine learning models throughout the AI application lifecycle.

Ofer Hermoni (OH) inquired about running ISF in various real-life scenarios and asked about the results. Masatomo Goto (MG) responded that they conducted multiple experiments and continuously updated functions with proofs of concept.

Nancy Rausch (NR) inquired about the deployment of models and recommended interfaces/methodologies for deployment. MG explained that during the mitigation techniques, functions are applied for post-processing to ensure compliance with fairness. Additionally, during pre-processing, the determination is made to check if the model meets fairness requirements. NR also asked if ISF provides pretrained models. MG responded that it would depend on the specific situation.

Susan Malaika (SM) asked about the requirements for integrating AI Fairness 360. Masatomo Goto (MG) mentioned that the refactoring was done and it could be integrated with the source code. Takao Mohri (TM) and Koji Yamamoto (KY) pointed out a potential issue with the API interface

mismatch. SM inquired whether the goal was to merge the two projects or have them run separately. MG stated that there are two options and they would discuss with the TSC (Technical Steering Committee) to determine the better approach.

SM requested feedback from Manish Nagireddy (MN), who mentioned that integration would be initiated via a pull request ([link](#)), following standards and future integration. The AI Fairness 360 team would review the code and discuss as necessary.MG asked about the timeline for integration with AI Fairness 360, but MN stated that it would be impossible to predict until the code was reviewed.

SM asked the TAC whether, if they believed integration with AI Fairness 360 was possible, the project should start as a Sandbox or a Pull Request. Ibrahim Haddad (IH) stated that it would be the Fujitsu Team's decision and they would need to determine the required timeframe for readiness. For now, the project could be welcomed as a Sandbox project.

SM confirmed that ISF could begin as a Sandbox project, with the possibility of further integration. NR asked whether the Fujitsu team preferred to perform research before ingesting the project as a Sandbox or start the ingestion and conduct research simultaneously, especially if there was additional refactoring to be done. MG stated that both approaches could be done in parallel.

Suparna Bhattacharya (SB) asked about the runtime overhead and efficiency. Inakoshi Hiroya (IH) mentioned that training on subgroups does introduce some overhead, particularly for gender subgroups. However, they strive to minimize the overhead by leveraging advanced optimization algorithms.

Proposed Resolution:

That the ISF project is approved by the Technical Advisory Council (TAC) as a Sandbox project of the LF AI & Data Foundation.

Susan Malaika made the first motion to approve, and Jerry Tan seconded the motion.

APPROVED - By vote of the TAC, the ISF project was approved as a Sandbox project.

Open Discussion
Susan Malaika (SM) requested an update on the Trusted AI Committee for the TAC. Nancy Rausch (NR) confirmed and asked for potential dates. NR suggested July 27th, August 10th, and August 24th.

Ibrahim Haddad (IH) announced that IBM has become a premier member of the LF AI&Data Foundation and expressed gratitude to Susan Malaika for her contributions to the TAC and upcoming role as a voting member.

IH mentioned the upcoming project presentations and encouraged continued participation.

Upcoming TAC Meetings
June 29 - Recommenders Project, a new Sandbox project proposal from Microsoft
July 13 - ShaderNN Project, a new Sandbox project proposal from OPPO

Please note the TAC is always open to agenda suggestions and guest presentations. If you have a topic you would like to request, please email tac-general@lists.lfaidata.foundation for review and coordination via the TAC Chair accordingly.

Closing
With no further business, the meeting was adjourned by NR at 6:44AM Pacific.

Chat:
09:01:16 From Ibrahim Haddad to Everyone:
    Hello everyone and welcome to the TAC call
09:03:10 From jerry-4paradigm to Everyone:
    hello, ibrahim
09:03:18 From Beat Buesser (ART, voting member) to Everyone:
    Reacted to "Hello everyone and..." with 👍
09:26:25 From Nora Anwar to Everyone:
    Reacted to "Hello everyone and w..." with 👍
09:30:17 From Manish Nagireddy (IBM) to Everyone:
    https://github.com/Trusted-
AI/AIF360/blob/c9a542b862cf988cbc788871c6cc7f2a926dad31/CONTRIBUTING.rst#pr-
checklist
09:38:48 From Ofer Hermoni to Everyone:
    Congrats!
09:39:00 From Nora Anwar to Everyone:
    🎉
09:39:12 From susan malaika (IBM) to Everyone:
    Nice presentation
09:39:24 From susan malaika (IBM) to Everyone:
    looking forward to integration

09:39:36 From Manish Nagireddy (IBM) to Everyone:

    Congrats :)

09:39:39 From Koji Yamamoto to Everyone:

    Reacted to "Congrats :)" with 👍

09:39:50 From Koji Yamamoto to Everyone:

    Reacted to "looking forward to i..." with 👍

09:40:06 From Masatomo Goto to Everyone:

    Reacted to "Congrats :)" with 👍