

**LF AI & Data Foundation Technical Advisory Council (TAC) Meeting Minutes  
August 10, 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: 8 voting members were eligible to vote and 8 voting members were in attendance. Quorum was met for this meeting.**

TAC Voting Member	Voting Representative	8/10/2023
<b>Quorum</b>	<b>Attendance/No. Eligible Votes</b>	<b>8 of 8</b>
4paradigm	Zhongyi Tan	Jerry Tan
Baidu	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	
Nokia	Michael Rooke	Michael Rooke
	Alternate: Jonne Soininen	
OPPO	Jimmy (Hongmin Xu)	
SAS	*Nancy Rausch	*Nancy Rausch
	Alternate: JP Trawinski	
ZTE	Wei Meng	
	Alternate: Liya Yuan	
Adversarial Robustness Toolbox Project	Beat Buesser	Beat Buesser
	Alternate: Kevin Eykholt	
Angel Project	Jun Yao	
Egeria Project	Mandy Chessell	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	
Pyro Project	Fritz Obermeyer	
OpenLineage	Julien Le Dem	

	Alternate: Mandy Chessell	Alternate: Mandy Chessell
	Alternate: Michael Robinson	Alternate: Michael Robinson

### **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.

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### **LF Attendees**

Ibrahim Haddad, VP Strategic Programs

Lucy Hyde, Senior Program Manager, Linux Foundation

Reden Martinez, Project Coordinator, Linux Foundation

Nora Anwar, Comms & Manager, Linux Foundation

Nathan Southern, Project Coordinator, Linux Foundation

Jill Lovato, Director of Communications and Outreach, Linux Foundation

Sunny Cai, Marketing Communications Manager, Linux Foundation

### **Invited Guests/Presenters**

- Joe Pearson, Edge Computing and Technology Strategist, IBM Networking, LFEEdge
  - Marvin Hansen, Director, Emet-Labs.com - Deep Causality
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### **Call to Order**

Nancy Rausch (NR) called the meeting to order at 6:03 am Pacific and Reden Martinez (RM) 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)
- LFEEdge Presentation
- DeepCausality Sandbox Project Proposal
- Open Discussion

### **Approval of Minutes**

Nancy Rausch (NR) presented a resolution to approve the minutes of the July 27, 2023 TAC meeting.

Proposed Resolution:

That the minutes of the July 27, 2023 meeting of the Technical Advisory Council of the LF AI & Data Foundation are hereby approved.

Mandy Chessell made the first motion to approve the minutes, and Jerry Tan / Michael Rooke seconded the motion.

APPROVED - By vote of the TAC, the minutes of the July 27, 2023 meeting of the Technical Advisory Council were approved.

### **LFEEdge Presentation**

Nancy Rausch (NR) extended a warm welcome to Sunny Cai (SC), Marketing Communications Manager from the Linux Foundation, and Joe Pearson (JP), Edge Computing and Technology Strategist at IBM, who also serves as the LFEEdge TAC Chair and will be delivering the LFEEdge presentation.

Joe Pearson (JP) initiated the discussion by providing an overview of LFEEdge's background and the potential collaborations between LFEEdge projects and those of LFAI and Data.

JP proceeded to present the stages of LFEEdge projects. Beginning with a high-level overview, the projects are categorized into stages. Stage one are the At Large Projects, designed for brand new initiatives. As projects mature and exhibit growing adoption, they can transition to stage two, known as Growth Projects. Upon achieving full maturity and self-sufficiency, with widespread adoption not reliant on any specific company, projects can advance to stage three, denoted as the Impact Project stage.

Additionally, JP highlighted LFEde's stage four, reserved for projects in emeritus status, typically those no longer actively maintained. Currently, only one project holds this status: Home Edge.

Currently, LFEde comprises 12 active projects, with two projects currently in the application process.

Subsequently, JP introduced these projects and their respective areas of focus.

JP also communicated that LFEde has been receiving a diverse range of inquiries from external entities, organizations, and various other projects. These inquiries primarily center around the optimal utilization of machine learning within the realm of edge computing, along with the deployment of Large Language models on the Edge. LFEde acknowledges that it does not possess specialized expertise in these specific areas. This recognition is a key driver behind LFEde's intention to seek partnerships with those who possess the requisite expertise in these domains.

JP outlined LFEde's existing utilization of machine learning, which spans several avenues. The first involves a platform directly interfacing with devices to ingest varied models and analytics, enabling data-driven inferences and actions such as Data Fusion. Secondly, tools like Open Horizon and Baetyl aid in migrating, packaging, and deploying ML models post-placement decisions. Notably, Open Horizon facilitates bidirectional synchronization across substantial edge computing device fleets, exceeding 40,000 nodes per instance. Additionally, Akraino offers robust blueprints with tangible code examples, demonstrating the seamless integration of machine learning assets into infrastructure. LFEde's fundamental approach prioritizes two key areas for highly advanced Edge Computing Devices: Model Federation and enhancing the efficiency and affordability of custom moderation and Foundational Models. This strategy represents an initial perspective, acknowledging further exploration is needed to chart a definitive course in pursuing these objectives.

JP proceeded to discuss various use cases that LFEde projects are presently engaged in, drawing from a survey conducted across all projects. These use cases span diverse verticals and are tailored to address specific challenges, many of which involve applications in visual analytics and data-driven insights. However, JP pointed out an area that remains unexplored: the integration of machine learning directly into the tools to facilitate model training based on platform and solution usage patterns. This specifically presents an opportunity for collaboration, where mutual benefits can be derived from joint efforts.

Sunny Cai (SC) then took over and discussed the collaborative possibilities between LF AI & Data and LFEde. SC highlighted the potential for collaboration through informative webinars. These webinar sessions could cover a diverse range of subjects, starting with an introductory overview

of LF Edge and LF AI & Data. Additionally, there's the opportunity to delve into the progress of AI at the Edge and to showcase real-world instances of AI applications in Edge environments, making for valuable webinar themes.

Nancy Rausch inquired about the process of involving projects. She asked how this involvement typically occurs—whether people proactively contact you or if there's a specific approach to initiate collaboration.

JP responded by suggesting that a good starting point could be joining the respective Slack channels of LFAI and LFEde. Alternatively, individuals can reach out via email. Another effective approach would be to directly contact JP or SC, who can then provide guidance and connect them with the right person to address their inquiries.

### **DeepCausality Sandbox Project Proposal**

Nancy Rausch (NR) welcomed Marvin Hansen (MH), the Director of Emet-Labs.com, who will be presenting the project proposal for the DeepCausality project.

Marvin Hansen (MH) started with the background of Emet-Labs. HM shared that Emet-Labs specializes in modeling financial market volatility, focusing on the interconnections between markets. However, the challenge lies in comprehending complex spatial-temporal patterns within these interconnected contextual time-series datasets. Although Deep Learning techniques have been employed to understand market volatility, they have limitations, notably in being context-blind, world-model-blind, and data-relation-blind.

During the discussion, MH highlighted both the DeepCausality Value and its Feature. In terms of value, DeepCausality offers comprehensive data enrichment and efficient causal representation, facilitating understanding across causality chains and sparking new directions like contextualized deep learning. On the other hand, its features encompass contextual analysis, utilization of a causaloid data structure, a focus on explainability, and the encouragement to explore novel concepts, data structures, and implementation techniques.

MH further elaborated into the next steps for Project DeepCausality, outlining its roadmap. This roadmap involves extending support for multiple contexts, acknowledging that intricate models might necessitate multiple contexts for accurate representation. The exploration of causal learning is a priority, with current causal models being manually crafted; the project has established groundwork through an assumable and inferable protocol. However, the challenge lies in the limited transferability of existing causal Reinforcement Learning learning approaches.

Deep Neuroevolution emerges as a potentially innovative avenue for advancing causal learning. Additionally, there's an intention to expand documentation and provide more code examples to enhance accessibility and understanding.

In summary, DeepCausality is a hyper-geometric computational causality library that enables fast and deterministic context-aware causal reasoning over complex multi-stage causality models. Deep Causality adds only minimal overhead and thus is suitable for real-time applications without additional acceleration hardware.

Currently, the project is applying the Sandbox stage with LFAI & Data.

#### Proposed Resolution:

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

Mandy Chessell made the first motion to approve, and Alexander Eichenberger seconded the motion.

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

#### **Open Discussion**

During the open discussion, no inquiries or clarifications were raised.

#### **Upcoming TAC Meetings**

August 24, 2023 - SapientML New Sandbox Project from Fujitsu, Trusted AI Committee update  
September 7, 2023 - Update from the MLSecOps Committee

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](mailto: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 7: 00 AM Pacific.

#### **Chat:**

20:58:01 From J Metz to Everyone:  
brb

21:00:09 From J Metz to Everyone:

back

21:10:47 From Ibrahim Haddad (LF AI & Data and PyTorch) to Everyone:

Very similar approach to LF AI & Data. Our stages are sandbox (early stage), Incubation (growth), Graduation (impact).

21:12:41 From Reden Martinez - Linux Foundation to Mandy Chessell (Egeria, OpenLineage)(Direct Message):

Hi Mandy, will you be representing Egeria and OpenLineage going forward?

21:13:31 From Mandy Chessell (Egeria, OpenLineage) to Reden Martinez - Linux Foundation(Direct Message):

Yes - Julien will turn up when he can and I am officially a backup

21:14:23 From Reden Martinez - Linux Foundation to Mandy Chessell (Egeria, OpenLineage)(Direct Message):

Ok great. Should I put in Julien as the lead and then you as alternate?

21:17:41 From Mandy Chessell (Egeria, OpenLineage) to Reden Martinez - Linux Foundation(Direct Message):

Yes please

21:20:11 From Ibrahim Haddad (LF AI & Data and PyTorch) to Everyone:

To explore our projects including Data related, please visit <https://landscape.lfaidata.foundation/> and look at projects represented in Large tiles: <https://landscape.lfaidata.foundation/>

21:21:00 From Ibrahim Haddad (LF AI & Data and PyTorch) to Everyone:

We also launched a new effort yesterday focused on open source Generative AI: <https://lists.lfaidata.foundation/g/gen-ai-committee>

21:21:21 From Ibrahim Haddad (LF AI & Data and PyTorch) to Everyone:

Joe - you have ~3 mins left. Thanks.

21:24:22 From Ibrahim Haddad (LF AI & Data and PyTorch) to Everyone:

Sunny, Joe -I am happy to do a call and discuss further on collaboration <https://calendly.com/ibrahimhaddad>

21:25:06 From Sunny Cai to Everyone:

fantastic! Thank you Ibrahim

21:27:42 From Marvin Hansen (DeepCausality) to Everyone:

Thank you Sunny & Joe for the great presentation

21:28:15 From Sunny Cai to Everyone:

thank you for having us!

21:28:22 From Nora Anwar ( Linux Foundation) to Everyone:

Reacted to "thank you for having..." with 

21:28:25 From Alexandre Eichenberger (IBM/ONNX) to Everyone:

Question: what framework is typically used for inferences among your projects?

21:28:29 From Joe Pearson (IBM, LF Edge) to Everyone:

Thanks, @Marvin. Sorry all, have to drop.

21:29:11 From LF AI & Data Zoom General to Everyone:

Thanks Joe and Sunny, for bringing forward that opportunity to explore projects in the Edge.