FATE Development Committee Meeting

2022/6/01

Agenda

- New repos: FATE-Builder / FedLCM
- FATE / KubeFATE 1.9 Update
- Contribution of Federated Lifecycle Manager
- Semi-supervised learning (Security SIG & EB China Tech)
- Trustworthy FL repo research
- Feature discussion & update
  - HW acceleration (Clustar & WeBank)
  - Intel CPU acceleration (Intel & VMware)
    https://github.com/FederatedAI/FATE-Community/pull/49
  - Training management portal (BOC Fintech)
- Technical articles for community

FATE 1.9.0

- In progress：
  - PSI Supports ECDH Protocol
  - PSI Support Exact Cardinality Estimation
  - Hetero-NN Support Torch Backend

- Done
  - support for upgrading from older major versions
  - site dataset permission control
  - use hook mechanism to implement custom authentication and authorization

- https://github.com/orgs/FederatedAI/projects/9
- https://github.com/orgs/FederatedAI/projects/10/views/1

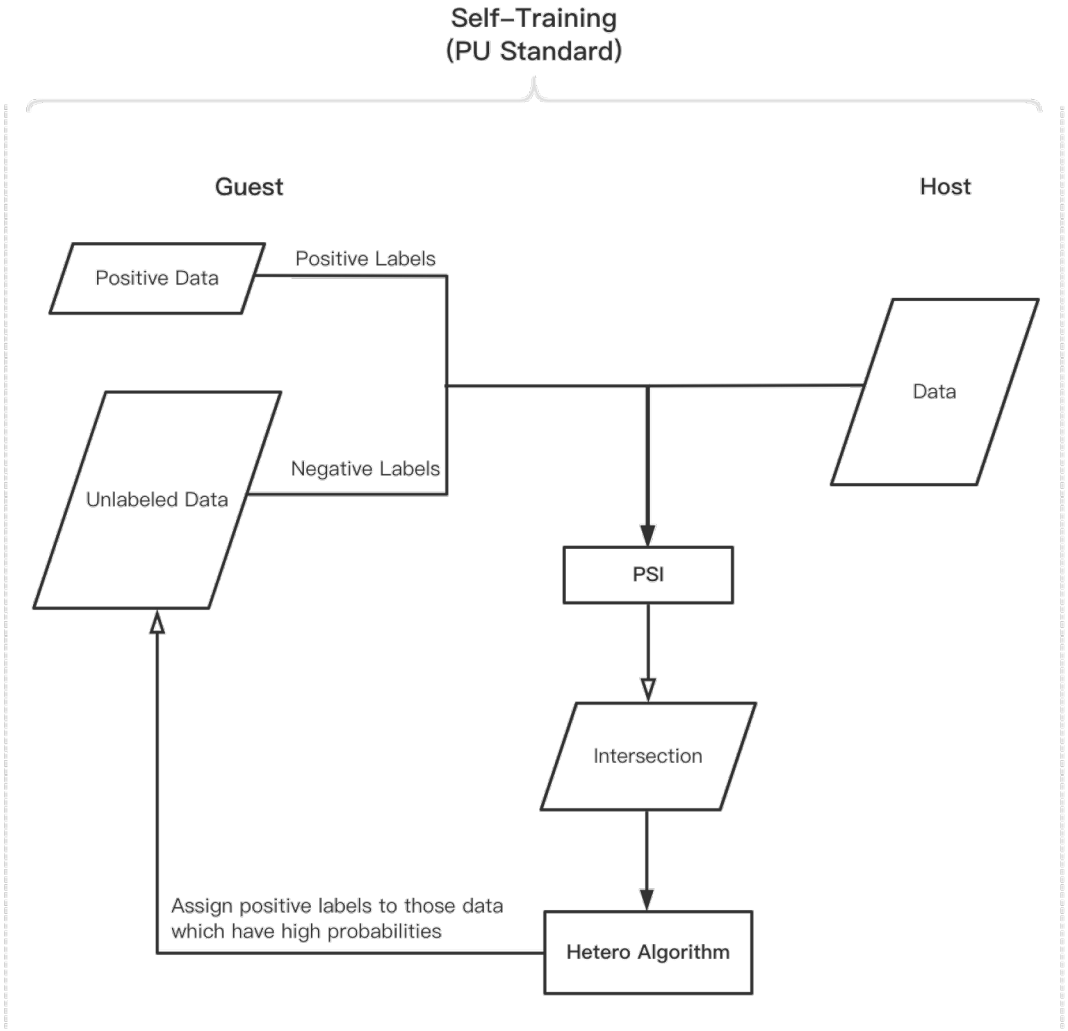
Federated Lifecycle Manager

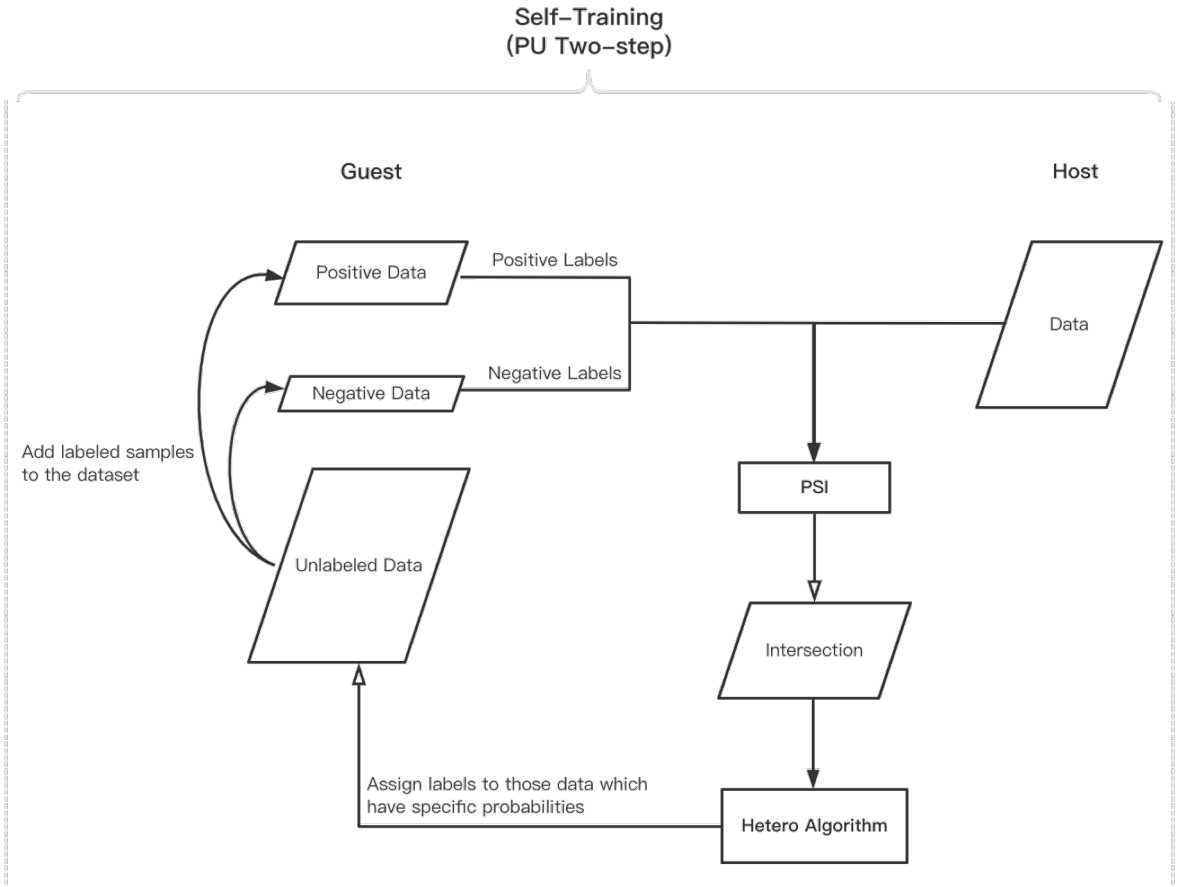
- Proposal: https://github.com/FederatedAI/FATE-Community/pull/48

- The federation provisioning and management is missing.
- The deployment solutions are CLI-based.
- An easy-to-use GUI deployment solution is needed.
- A Federated Lifecycle Manager is easy to use for large-scale FATE cluster provisioning and management.
- To create a new repo for the Federated Lifecycle Manager (FedLCM) for the development of this feature.

- https://github.com/FederatedAI/FATE-Community/issues/45

Semi-Supervised Learning

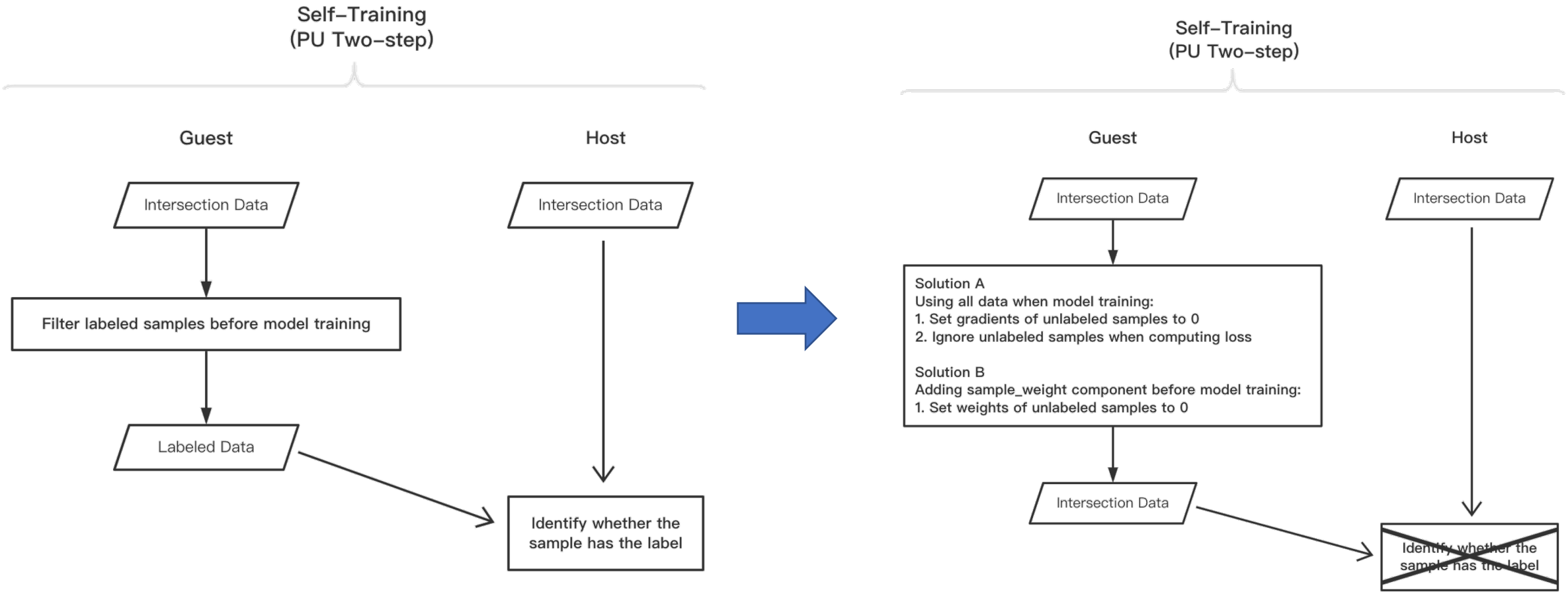




https://github.com/FederatedAI/FATE/issues/3930

https://github.com/FederatedAI/FATE/pull/3972

Semi-Supervised Learning



Repo of FATE-Experimental

- Create a repo of ‘FATE-Experimental’
- Goal:
  - Mainly for code used for research or not verified in production environment
  - Make it easy for the communities to contribute to FATE
  - Protect the main repo of FATE
- How:
  - The code of ’FATE-Experimental’ can be merged into ‘FATE’ once it is verified (1. get approvals from SIGs or stand test of time; 2. standard proposal/PR process)
  - The document of ‘FATE’ can refer to the functions of ‘FATE-Experimental’ to make ‘FATE-Experimental’ better known to the public. The document should contain some alert words, such as ‘cautions: the function is not verified’.

Trustworthy Federated Learning

- Research paper and related code to be published under FederatedAI/research repo.
- The repo is for testing purposes and should NOT be used for production.
- Working on guidelines and governing rules of the repo

Feature discussion & update

- HW acceleration
- Training management portal
- Semi-supervised learning

GPU/FPGA acceleration