FederatedAI
TSC Board Meeting

Dec 02, 2021

Agenda

- TSC Chair Election
- Introduction of Honorable Chair
- Discussion on project plan in 2022
- Certificate of FATE TSC Board member
- Follow-ups

TSC Chair Election

- Nominees:
  - Qiang Yang, Webank
- Voting through GitHub
  - winning a simple majority of the votes from the existing TSC members
- Public voting result on GitHub

杨强

加拿大皇家科学院和加拿大工程院两院院士，国际人工智能界的领军人物，迁移学习的开创人，联邦学习主要开创者和带头人

他在人工智能界研究30余年，香港科技大学任教15年。发表400余篇学术论文著作，SCI他引8000余次，谷歌学术引用70000余次，H指数117。先后在华为（诺亚方舟创始主任）、第四范式、中国移动、微众银行工业任职。他提出并长期研究迁移学习，产出研究成果和工业应用：

1） 提出人工智能界第一个迁移学习算法框架，研究成果在该领域引用最高。

2）构建产出迁移学习关键技术和软件平台，为工业规模应用提供支撑。在微信、华为、百度、第四范式规模化产业应用。服务上亿用户。

3）第一个提出纵向联邦学习和联邦迁移学习、推出IEEE标准和开源平台，攻克隐私挑战。在微众银行、智慧社保领域规模化应用。

他于2013年7月当选为国际人工智能协会（AAAI）院士，是第一位获此殊荣的华人，之后又于2016年5月当选为AAAI执行委员会委员，是首位也是至今为止唯一的AAAI华人执委。2017年8月他当选为国际人工智能联合会(IJCAI，国际人工智能领域创立最早的顶级国际会议)理事会主席，是第一位担任主席的华人科学家。2019年他获得国内智能科学最高奖项“第九届吴文俊人工智能杰出贡献奖”。近期，他又被选为AAAI 2021 大会主席，将成为AAAI 大会历史上第二位大会主席，也是担任此职位的首位华人。他是香港人工智能与机器人学会创会理事长；ACM KDD China 创会主席；多个国际学会ACM/IEEE/AAAS/IAPR Fellow

Introduction of Honorable Chair

Jie Tang

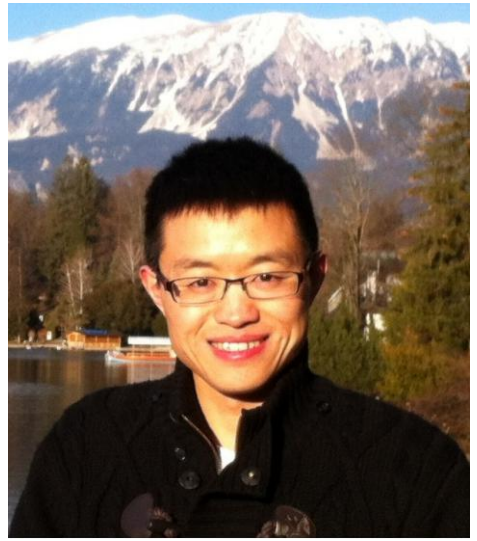
Professor, IEEE Fellow

Vice Chair, Department of Computer Science and Technology

Tsinghua University

Vice Dean, Beijing Academy of Artificial Intelligence

Director, THU-CAE Knowledge & Intelligence Joint Research Center



- Research interest：Artificial Intelligence, Social Networks, Data Mining, Knowledge Graph
- Publications (Total Citations: 20,189; h-index: 73; i10-index: 252)：400+ articles in major computer science conferences and 80 articles in the core journals of computer science
- As PC Co-chair of WWW'21, CIKM'16, WSDM'15, ASONAM'15, and SocInfo'12
- Honored with the UK Royal Society Newton Advanced Scholarship Award, CCF Young Scientist Award, and NSFC Distinguished Young Scholar.

Discussion on project plan in 2022

- Project development, collaboration & roadmap
- Community evangelism & promotion
- Plan to be published on Github

Clustar

Project

- Opensource Heterogeneous Acceleration Module to FATE
    - Particially opensource GPU acclearation code
    - Opensource data structure/architecture design needed for Heterogeneous Acceleration
- Participate to Improve the Performance of FATE
- Contribute to the FATE Inter-connection Project
    - Memory Layout（CPU<->GPU, CPU<->FPGA）

Community

- Organize or Co-organize Online/Offline Events/Seminars/Handouts
- Connect Our Industrial Partners to FATE Community
- Participate in Community Internationalization: Document and Q&A

ICBC

Project

- Contribute to standards and their applications of FATE project, and promote the project development in the industry from the perspective of the application.
- Contribute ideas on data element market building for privacy computing enterprise applications.
- Explore and seek solutions for hardware acceleration.
- Increase research on Federated Transfer Learning, and apply it in the financial sector.

Community

- Expand community influence
- Responsible for writing FATE technical articles

UnionPay

Project

- FML interoperability, mainly to form factual standards
    - Construction of FML interoperable framework and API definition for each module
    - Contribute FML interoperable API repository to FATE
- Reference implementation of interoperability API
    - Framework and algorithm separation, support the loading of internal/external algorithms
    - Decoupling of federated algorithms from security algorithms
    - construction of algorithm marketplace
- Performance enhancements
    - Algorithms: PSI implementation with OT-based algorithm, C/C++ replacement of MPC/HE lib
    - System: hardware acceleration, architecture optimisation

Community

- Participate in domestic consortium organizations as a community and participate in standards building
- Organise regular community events and strengthen university outreach
- Participate in international promotion

VMware

Project

- Containerization
- Federated Learning Interoperability, including infrastructure interaction and framework interaction
- algorithm marketplace：Algorithm module plug-in, Incentives
- Deployment and O&M management： KubeFATE: monitoring, alerting, FATE-Operator: Common operator refactoring
- Application Scenario Extensions: Multi-Cloud, Edge/IOT

Community

- Build and improve the community to create a complete open source ecosystem
- Support community activities to expand community impact
- Attract more outside participants and expand the community
- Strengthen the promotion of federated learning solutions and facilitate the implementation of FATE open source projects

WeBank

Project

- All-round improvement in effectiveness, efficiency, security and lightness
- Upgrade the development framework to improve access efficiency and reduce development costs
- Enrich the algorithm framework to support more algorithm scenarios and applications
- Expand application scenarios to support both hetero-federated and homo-federated integration scenarios
- Support big data open source ecology at enterprise level
- Deepen the intersection with AI open source ecology
- Embrace cloud, support more mainstream cloud
- Support federated algorithm audit
- Support more secure computing protocols

Community

- Investment of resources to promote ecosystem development and industrial connection, and cooperation with LF to strengthen ecosystem effects
- Coordination and management of community affairs to improve decision-making efficiency
- Integrate operational resources to achieve joint community operation and expand influence

Summary

Subject	Person in charge
Federated Learning interoperability	Yongkai Zhou
FATE Performance Acceleration	Junxue Zhang
Federated Learning Standards	Qiang Yang
FATE community influence	Henry Zhang
Scenarios and Cases	Chuang Zhang
Community Democratization	Qiang Yang, Henry Zhang

Certificate of FATE TSC Board member

CERTIFICATE

This is to certify that

COMPANY NAME

has been elected

as a Board member of Technical Steering Committee of **FATE PROJECT**

from November 11, 2021 to November 10, 2023.

The board membership is subject to the terms and conditions

set out in the FATE Project Technical Charter.

THE LINUX FOUNDATION

FATE

Follow-ups

- Voting about TSC Chair Election on GitHub by TSC members
- Nomination of new TSC maintainer and approval by existing TSC members
- Resignation of existing TSC maintainers (if any)