Shuyu Chen

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EDUCATION

Fudan University Master of Engineering 09/2021 — 06/2025
Major: Computer Science and Technology

Tianjin University Bachelor of Engineering 09/2017 — 09/2021
GPA: 3.83/4.0, Rank: 4/176, Major: Software Engineering

INTERNSHIP

Microsoft STCA *software engineering* 06/2020 — 09/2020
Compress the FastTreeRegeression model and make the compressed model compatible with the original product

RESEARCH EXPERIENCE

Focus on privacy computing, including Private Set Intersection and Secure Multi-party Learning during the master period.

Private Set Intersection (PSI) *first author* 09/2022 — Now

- Efficient and Secure data alignment before vertical privacy-preserving machine learning based on the Private Set Intersection (pre-submitted to NDSS in July).
- Updatable secure data alignment (pre-submitted to S&P in August).
- Design efficient secure protocols and provide security proof.

Secure Multi-party computation-based machine Learning *co-author* 09/2021 — 09/2022

- Implement privacy-preserving decision trees, Hidden Markov Models, and neural networks from basic function layers to model layers based on secure multi-party computation in C/C++.
- Optimize operators for the above models in secure multi-party learning.

Data analysis on Blockchain *first-author* 11/2020 — 09/2021

- Deanonymization of transactions on Bitcoin: Extract the transaction characteristics of Bitcoin and use two classification models to distinguish whether multiple transaction addresses belong to the same user.

PROJECTS

FudanMPL 09/2021 — Now

- Garnet: independently develops the compiler layer and virtual machine layer of instructions related to PSI and is compatible with all existing virtual machines of Garnet
- Queqiao: Reconstructing the neural network training framework based on sharmir secret sharing

Link: https://github.com/FudanMPL
Technical points: Python/C++, neural network and compiler/virtual machine

WeiPeiYang 09/2018 — 06/2021
Use Kotlin to independently develop the employment project of the WeiPeiTang app, with an average daily users of 1,000+;

AWARDS

Scholarships
National Scholarship 2020,2019,2018
The Second Price Academic Scholarship of Fudan University 2022

Honors
Outstanding graduate of Tianjin University 2021
Outstanding Youth Nomination Award of Department of Intelligence and Computing, Tianjin University 2021

Prizes
First Prize in the Computer Application Competition for College Students from Five Provinces in North China, Hong Kong, Macao, and Taiwan 2019
First Place in women's 3000 meters at the 57th Tianjin University Track and Field Games 2018