TRUONG SON NGUYEN

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My research interest is building secured, trust-able AI system, with the focus on how to protect user's precious data during AI execution (both training and inferencing) using Cryptography's tools and protocols.

EDUCATION

Tokyo Institute of Technology Apr 2017-Sep 2021
Bachelor of Engineering (Overall GPA: 3.12)

- Bachelor Thesis: Image Analysis System for Football Games.
- Advisor: Yukihiko Yamashita

Arizona State University Jan 2022- now
PhD of Computer Science (Cumulative GPA: 3.90)

- Research Focus: Privacy Preserving Machine Learning
- Advisor: Ni Trieu

PUBLICATIONS

Article in Conferences

- *Aitia: Efficient Secure Computation of Bivariate Causal Discovery*
  Truong Son Nguyen, Wang Lun, Evgenios Kornaropoulos, Ni Trieu, **CCS 2024**
- *Toward A Practical Multi-party Private Set Union*
  Jiahui Gao, Truong Son Nguyen, Ni Trieu, **PETS 2024**

Article under Review

- *Achieving Data Reconstruction Hardness and Efficient Computation in Multiparty Minimax Training*
  Truong Son Nguyen, Yi Ren, Guangyu Nie, Ni Trieu, **under review at NeurIPS 2024**.

EXPERIENCE

VinBigData, VinGroup Hanoi, Vietnam
AI Research Intern Jun 2020 - Oct 2020

- Research data generation for text detection and text recognition problems. Customize tools such as SynthText, UnrealText to generate database for pre- training Deep Learning Model

AI Engineer Nov 2020 - Feb 2021

- Work with peer researcher and engineer to study Deep Learning algorithm for core problems such as: Image Generation, 3D Rendering for AR Application, Text Sentiment Analysis, Vietnamese Accent Restoration

Computer Vision Researcher Feb 2021 - Dec 2021
Work in Computer Vision private projects (in amount of contribution order):

- OCR-pretrained model
- Synthetic scene Generation for pre-training object detection in low-resource problems
- Face Anti-spoofing, Face Identification
- Autonomous Vehicle Data Collection Calibration

AWARDS/SCHOLARSHIPS

- Fulton Fellowship Award 2021
- MEXT Scholarship for Bachelor student 2017-2021
- 2nd prize Vietnam Mathematical Olympiad for High school students (VMO) 2015
- 3rd prize Vietnam Mathematical Olympiad for High school students (VMO) 2014

SKILLS

- **Relevant Coursework:** Applied Cryptography (CSE539), Software Security (CSE545), Artificial Intelligence (CSE571), Data Mining (CSE572)
- **Programming:** Python, C++
- **Framework and Library:** PyTorch, Crypten, SEAL, Pybind11
- **Communication:** Vietnamese (Native), English (IELTS 8.0), Japanese (N3).