# Shaopeng Fu

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Last Update: August 2024

Thuwal, Saudi Arabia

Aug. 2023 - Present

Mar. 2021 - Jul. 2022

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# **EDUCATION**

King Abdullah University of Science and Technology

Provable Responsible AI and Data Analytics (PRADA) Lab

Ph.D. Student in Computer Science

Advisor: Prof. Di Wang

The University of Sydney Sydney, Australia

UBTECH Sydney Artificial Intelligence Centre Oct. 2019 – Jan. 2021

Master of Philosophy (Engineering and IT)

Advisor: Prof. Dacheng Tao

Thesis Title: Bayesian Inference Forgetting

South China University of Technology Guangzhou, China

**B.Sc in Mathematics and Applied Mathematics**Sep. 2015 – Jun. 2019

Advisor: Prof. Chuhua Xian (Advising the Competitive Programming Group affiliated to School of CSE)

# **WORK EXPERIENCES**

King Abdullah University of Science and Technology Thuwal, Saudi Arabia

Research Intern (Topic: Adversarial Robustness; Advisor: Prof. Di Wang) May 2023 – Aug. 2023

JD.com, Inc.

Beijing, China

Algorithm Engineer @ JD Explore Academy (Full-time)

• First-author of two ICLR 2022 papers.

• Co-author of the White Paper on Trustworthy Artificial Intelligence (Chn Ver.) (Eng Ver.).

• Chief developer of **TAICore**, a trustworthy AI assessment toolkit powered by JD Explore Academy for assessing the robustness and privacy-preserving ability of white-box and black-box ML models.

The University of Sydney Sydney, Australia

Research Assistant (Topic: Machine Unlearning; Advisor: Prof. Dacheng Tao)

Oct. 2019 - Oct. 2020

#### RESEARCH INTERESTS

My research lies in trustworthy AI. I am interested in using mathematical principles to identify and mitigate security and privacy risks in real-world machine learning systems. Currently, I am working on:

- · Adversarial Robustness of Pre-trained Models
- · Privacy-preserving Ability of Pre-trained Models

## **PUBLICATIONS**

## **CONFERENCES & JOURNALS**

- 1. **Shaopeng Fu** and Di Wang. Theoretical Analysis of Robust Overfitting for Wide DNNs: An NTK Approach. In *International Conference on Learning Representation (ICLR)*, 2024.
- 2. **Shaopeng Fu**, Fengxiang He, Yang Liu, Li Shen, and Dacheng Tao. Robust Unlearnable Examples: Protecting Data Against Adversarial Learning. In *International Conference on Learning Representation (ICLR)*, 2022.

- 3. **Shaopeng Fu**\*, Fengxiang He\*, and Dacheng Tao. Knowledge Removal in Sampling-based Bayesian Inference. In *International Conference on Learning Representation (ICLR)*, 2022.
- 4. Zeke Xie, Fengxiang He, **Shaopeng Fu**, Issei Sato, Dacheng Tao, and Masashi Sugiyama. Artificial Neural Variability for Deep Learning: On Overfitting, Noise Memorization, and Catastrophic Forgetting. *Neural Computation 33 (8)*, 2021.

## **MANUSCRIPTS**

- Shaopeng Fu, Xuexue Sun, Ke Qing, Tianhang Zheng, and Di Wang. Pre-trained Encoder Inference: Revealing Upstream Encoders In Downstream Machine Learning Services. arXiv preprint arXiv:2408.02814, 2024.
- 2. Fengxiang He\*, **Shaopeng Fu**\*, Bohan Wang\*, and Dacheng Tao. Robustness, Privacy, and Generalization of Adversarial Training. *arXiv preprint arXiv:2012.13573*, 2020.

## **SELECTED AWARDS**

# **International Collegiate Programming Contest (ICPC)**

• The ICPC Asia-East Continent Final Xi'an Site

The ICPC Asia Regional Contest Qingdao Site

• The ICPC Asia Regional Contest Shenyang Site

• The ACM-ICPC Asia Regional Contest Xi'an Site

2017-2018 China National Scholarship 2016-2017 China National Scholarship

Silver Medal, Dec. 2018

Silver Medal, Nov. 2018

Gold Medal (Rank: 6/186), Oct. 2018

Silver Medal, Oct. 2017

Ministry of Education of P.R. China, Nov. 2018 Ministry of Education of P.R. China, Nov. 2017

# **SERVICES**

#### **Conference Reviewer**

• ICML (2022, 2023, 2024), ICLR (2022, 2023, 2024, 2025), NeurIPS (2021, 2022, 2023, 2024), AISTATS (2021, 2024).

#### **Conference Committee Member**

• ACM CCS (2024 Artifact Evaluation), AAAI (2025).

# **Journal Reviewer**

• IEEE TPAMI (2024), IEEE TCYB (2021), Springer NPL (2020).

#### **TEACHING**

Teaching Assistant of CS 229: Machine Learning, Spring 2024 @ KAUST

#### **MISCELLANEOUS**

Competitive Programming: My Codeforces account is fshp971.

**Programming Languages:** C/C++ (Mainly for Competitive Programming), Python (Mainly for AI Research).

Others: PyTorch, JAX, Vim, Linux, Arch Linux.