

# Jianan Chen

276 Innovation Hall 625 W Michigan St, Indianapolis, 46202, IN  
317-777-0889 | [chen3873@purdue.edu](mailto:chen3873@purdue.edu) | <https://drjonac.github.io/DrJonaC/>

## EDUCATION

- Purdue University**, Department of Computer Science 09/2020-Now  
◆ Ph.D. of Computer Science (Supervisor: Dr. Qin Hu, Dr. Snehasis Mukhopadhyay)  
◆ Research area: Federated learning, Game theory, Privacy Protection
- Beijing Normal University**, College of Information Science and Technology 09/2015-06/2019  
◆ Bachelor of Science in Computer Science and Technology (Rank: 6/45)

## RESEARCH EXPERIENCE

- ◆ **Privacy and Security Preservation for Federated Unlearning** 09/2023-Now  
Advisor: Qin Hu, Associate Professor
- ◆ **Game Theory and Deep Learning Methods in Economics** 01/2023-Now  
Advisor: Subir K. Chakrabarti, Professor, Qin Hu, Associate Professor
- ◆ **Blockchain-Based Distributed Machine Learning For Mobile Crowd Sensing** 09/2020-09/2023  
*Project supported by NSF CRII Award #2105004*  
Advisor: Qin Hu, Associate Professor
- ◆ **Representation of Christian Civilization in Virtual Reality** 09/2018-06/2019  
*Open Project Fund of the Key Laboratory of Computer Science, Chinese Academy of Sciences, "Research on Knowledge Visualization Based on Virtual Reality"*  
Advisor: Yanlin Luo, Associate Professor
- ◆ **Software Development Engineering for WeChat Programs H! Morning** 04/2017-06/2018  
*National College Student Research Training & Innovation and Entrepreneurship Program*  
Advisor: Ying Wang, Professor
- ◆ **Research on Combination of Visual Reality and Digital Multimedia Technology** 04/2016-05/2017  
*Scientific Research Foundation Project of Beijing Normal University*  
Advisor: Haibo Wang, Professor

## INTERNSHIP

- ◆ **Beijing Didi Infinity Technology and Development Co., Ltd** Beijing, China  
Position: Data Operation Assistant 03/2018-06/2018
- ◆ **Want Want China Times Cultural Media Co., Ltd** Beijing, China  
Position: New Media Operator 04/2016-05/2016

## TEACHING EXPERIENCE

- ◆ **AIS 20000 - Introduction To Data Science, Purdue University, Lecturer** 2024 Fall
- ◆ **CSCI 43600 – Principles of Computer Networking, TA** 2023 Fall
- ◆ **CSCI 49000 – Wireless and Mobile Security, TA** 2023 Spring
- ◆ **CSCI 43600 – Principles of Computer Networking, TA** 2022 Fall

## EXTRACURRICULAR ACTIVITIES

- Volunteer teaching in Linxia Hui Autonomous Prefecture, Gansu Province Team Leader** 08/2017
- Propaganda Department of Party Committee, BNU Editor-in-Chief** 09/2016-09/2017
- Second Cross-straits Youth Forum Student Representative of Beijing Normal University** 07/2016
- The 10th Information Culture Festival, BNU Planner** 04/2016-05/2016
- BRICS University President Forum Coordinator (only one from freshmen)** 09/2015

## SELECTED HONORS

- Recipient of University Fellowship, IUPUI 04/2022
- First Prize in Beijing Undergraduate Mathematical Contest in Modeling 09/2017
- Outstanding Individual in Work-study 2017
- Top 10% in BNU Mathematical Contest in Modeling 2017

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## **PUBLICATIONS**

- ◆ Chen, Jianan, Honglu Jiang, and Qin Hu. "Utility-Enhanced Personalized Privacy Preservation in Hierarchical Federated Learning." *IEEE Transactions on Mobile Computing* (2024).
- ◆ Chen, Jianan, Qin Hu, Fangtian Zhong, Yan Zhuang, and Minghui Xu. "Upcycling Noise for Federated Unlearning." *IEEE Transactions on Information Forensics and Security* (2024).
- ◆ Chen, Jianan, Qin Hu, and Honglu Jiang. "Alliance Makes Difference? Maximizing Social Welfare in Cross-Silo Federated Learning." *IEEE Transactions on Vehicular Technology* (2023).
- ◆ Chakrabarti, Subir K., Jianan Chen, and Qin Hu. "Stationary Markov Equilibrium Strategies in Asynchronous Stochastic Games: Existence and Computation." *Algorithms* 17.11 (2024): 490.
- ◆ Chen, Jianan, Qin Hu, and Honglu Jiang. "Strategic signaling for utility control in audit games." *Computers & Security* 118 (2022): 102721.
- ◆ Chen, Jianan, Qin Hu, and Honglu Jiang. "Social welfare maximization in cross-silo federated learning." *ICASSP 2022-2022 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. IEEE, 2022.
- ◆ Peng, Cheng, et al. "Energy-efficient device selection in federated edge learning." *2021 International Conference on Computer Communications and Networks (ICCCN)*. IEEE, 2021.

## **SERVICES**

Reviewer for Journal of Network and Computer Applications (JNCA), Journal of Systems Architecture (JSA), High-Confidence Computing (HCC), INFOCOM (2023,2024), GLOBALCOM (2022,2023), BIBM (2024)

## **HIGHLIGHT SKILLS**

Video Production (Adobe After Effects, Adobe Premiere), Image Processing (Photoshop, Snapseed, VSCO), Game Production (RPG Maker), Painting (Color Pencil, Watercolor, Traditional Chinese Painting)