

Shidong Pan

🌐 <https://shidongpan.github.io/>

✉ shidong.pan@anu.edu.au

Personal Strengths

- 1) Proven leadership in developing a clear vision for research direction and creating a strategic plan to achieve research goals, with resilience, adaptability, networking, and collaboration.
- 2) Demonstrated expertise in research with publications in prestigious venues such as USENIX Security, showcasing groundbreaking work on Usable Privacy & Security and Responsible AI research.
- 3) Extensive coursework teaching and mentorship experience, achieving high student satisfaction in advanced computing courses and guiding numerous research projects to success.
- 4) Effective collaboration with international education agencies to promote and enhance international student programs, leveraging unique insights into the global outreach of educational initiatives.

Education Experience

The Australian National University & CSIRO's Data61 <i>Doctor of Philosophy, School of Computing. Primary Advisor: Zhenchang Xing</i>	Oct. 2021 – Present
The Australian National University <i>Master of Machine Learning and Computer Vision. Grade: High Distinction</i>	Feb. 2020 – Jul. 2021
The Australian National University <i>Bachelor of Advanced Computing (Honours), joint degree with Shandong University (Weihai)</i>	Sep. 2015 – Dec. 2019

Working Experience

Teaching Assistant (TA) <i>Australian National University</i>	Feb. 2020 – Dec. 2021 <i>Canberra, Australia</i>
<ul style="list-style-type: none">• (Head TA) COMP8535, Engineering Data Analytics, 2021S1, supervised by Prof. Hongdong Li• (Head TA) COMP8536, Deep Learning for Computer Vision, 2021S2, supervised by Prof. Nick Barnes• COMP4650, Document Analysis, supervised by Alex Antic• ENGN4528, Computer Vision, supervised by Prof. Nick Barnes• COMP1710, Web Development and Design, supervised by Prof. Tom Gedeon	
Research Assistant, Visiting Ph.D. Student <i>Singapore Management University</i>	Mar. 2023 – Sep. 2023 <i>Singapore</i>
<ul style="list-style-type: none">• Supervised by Prof. David Lo• Worked on research projects in Center of Research Intelligent Software Engineering	
University Coordinator/Student Assistant <i>Australian Education Management Group (AEMG)</i>	May 2019 – May 2020 <i>Australia</i>
<ul style="list-style-type: none">• Coordinated advertisement and assisted in coursework student recruitment for the Australian National University and Shandong University (Weihai) “2+2” joint degree program.• Organized academic and social events, facilitating engagement and support for program students.• Provided consultation on course selection, degree application, and career development, aiding students in navigating academic and career pathways.	

Research Interests

My research spans **Usable Privacy and Security**, Software Engineering, and Responsible AI broadly. Specifically, my research landscape is detailed across three primary areas of work:

- 1) **Regulation-driven Software Privacy Compliance Analysis.** [Security'24 (a)][AI&Ethics'24]
- 2) **User-centric and Regulation-driven Privacy Enhancing Designs.** [Security'24 (b)][arXiv (a)]
- 3) **Responsible AI for Software Engineering.** [FAccT'23][TSE'24][arXiv(b)]

Selected Publications

[ACM FAccT'23 - ChatLLM] Dawen Zhang, Pamela Finckenberg-Broman, Thong Hoang, **Shidong Pan**, Zhenchang Xing, Mark Staples, and Xiwei Xu. Right to be Forgotten in Era of Large Language Models: Implications, Challenges, and Solutions.

[USENIX Security 2024] **Shidong Pan**, Dawen Zhang, Mark Staples, Zhenchang Xing, Jieshan Chen, Xiwei Xu, and James Hoang. Is It a Trap? A Large-scale Empirical Study And Comprehensive Assessment of Online Automated Privacy Policy Generators for Mobile Apps. Summer round acceptance rate: 19%.

[Springer AI and Ethics 2024] Dawen Zhang, **Shidong Pan**, Thong Hoang, Zhenchang Xing, Mark Staples, Xiwei Xu, Lina Yao, Qinghua Lu, and Liming Zhu. To Be Forgotten or To Be Fair: Unveiling Fairness Implications of Machine Unlearning Methods.

[USENIX Security 2024] **Shidong Pan**, Zhen Tao, Thong Hoang, Dawen Zhang, Tianshi Li, Zhenchang Xing, Xiwei Xu, Mark Staples, Thierry Rakotoarivelo, and David Lo. {A New Hope}: Contextual Privacy Policies for Mobile Applications And an Approach Toward Automated Generation.

[Transactions of Software Engineering (under-review)] Dianshu Liao, **Shidong Pan**, Qing Huang, Xiaoxue Ren, and Zhenchang Xing. Context-aware Code Generation Framework for Code Repositories: Local, Global, and Third-Party Library Awareness

Pre-print Papers

[arXiv] **Shidong Pan**, Zhen Tao, Dawen Zhang, James Hoang, Zhenchang Xing, Xiwei Xu, Qinghua Lu, and Mark Staples. Toward the Cure of Privacy Policy Reading Phobia: Automated Generation of Privacy Nutrition Labels From Privacy Policies.

[arXiv] **Shidong Pan**, Tianchen Guo, Lihong Zhang, Zhenchang Xing, and Xiaoyu Sun. {IntelliCiD}: A Large-Scale Discovery of Compatibility Issues in Android Applications.

On-going Projects

Shidong Pan, Ze Shi Li, and Jingjie Li. Discovery of Security and Privacy Discussions of Smart Vehicles in Short Video Platforms.

Shidong Pan, Yichi Zhang, Tianshi Li. An Empirical Study of Instructions for Data Rights in Privacy Policies for Mobile Applications.

Meixue Si, **Shidong Pan**, Dianshi Liao. Regulation-driven AI Nutrition Labels for Online Generative AI-based Applications and An Approach Toward Automated Generation.

Assistant Lecturer

Feb. 2020 – Dec. 2021

Australian National University

Canberra, Australia

- [COMP8535 Engineering Data Analytics] This is an advanced level postgraduate course, covering technologies and methodologies necessary for inferring underlying patterns from raw data. I drafted assignments, led the marking procedure, and delivered tutorials. The teaching team earned the highest student satisfactory in four years. I obtained 4.3/5.0 satisfactory across five metrics, which is the highest in the teaching team.
- [COMP8536 Advanced Topics in Deep Learning for Computer Vision] This is a research project-based course about Deep Learning, with a particular emphasis on their use in Image Processing and Computer Vision. I delivered tutorials, instructed student research projects, and led the grading procedure. The teaching team increased the student satisfactory from 77% to 89% and I obtained 4.5/5.0 satisfactory across five metrics.

Teaching Fellowship, Guest Lecturer

(est.) May 2024

Shandong University (Weihai)

Shandong, China

- Teaching Software Engineering for undergraduate students

University Student Research Project Mentor

June 2022 – Present

Australian National University

Australia

- [PhD Research Project] Dianshu Liao, “Context-aware Repository-based Code Generation by LLMs”
- [Master’s Thesis] Zhen Tao, “UI-Code-Policy: Developer-oriented Privacy Labels for Mobile Applications”
- [Master’s Thesis] Ke Ran, “Chronological Analysis of the Co-evolution between Privacy Policy Description and Application Implementation”
- [Honour’s Thesis] Zhen Tao, “Design and Evaluation Automated Contextual Privacy Policy on Mobile Apps”
- [Honour’s Thesis] Yichi Zhang, “Extraction and Automation of Users’ Data Rights in Apps’ Privacy Policies”
- [Honour’s Thesis] Tianchen Guo, “An Empirical Study of LLM-empowered Code Understanding”
- [Honour’s Thesis] Lihong Zhang, “Incompatibility Android API detection in Mobile Applications by LLMs”
- [Honour’s Thesis] Yikai Ge, “Usable Security and Privacy Challenges and Implications in Voice-based Third-party Assistant Mobile Applications”
- [Honour’s Thesis] Litian Wang, “AI-empowered Tools in Software Development Process: Utility, Productivity, and Responsibility.”

External Research Mentor

Nov 2023 – Present

Co-supervise/Instruct research projects for the following PhD students

- [Renmin University] Meixue Si, “Regulation-driven AI Nutrition Labels for Online Generative AI-based Applications And an Approach Toward Automated Generation”
- [Tianjin University] Linyi Han, “Augmenting Missing Key Aspects Generation in Vulnerability Descriptions of Long-tail Software through Feature Inference”

Referees

- **Zhenchang Xing**, Senior Principal Research Scientist, Data61, zhenchang.xing@data61.csiro.au
- **Jingjie Li**, Lecturer/Assistant Professor, University of Edinburgh, jingjie.li@ed.ac.uk
- **Tianshi Li**, Assistant Professor, Northeastern University, tia.li@northeastern.edu
- **David Lo**, Professor, Singapore Management University, davidlo@smu.edu.sg