

Carter Buckner
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Research Interests

AI Interpretability, Trustworthy AI, AI Ethics, Privacy-Preserving AI, User-Centered Privacy, Privacy Policy

Education

Ph.D. Computer Science | Focus: User-Centered Privacy and AI Aug 2022 – *present*

University of Arkansas, Fayetteville (UARK)

B.S. Computer Science | Minor Music Dec 2021

University of Arkansas, Fayetteville (UARK)

Awards and Fellowships

NSF LSAMP Bridge to Doctorate Fellowship Aug 2022

P.K. Kuroda Endowed Graduate Fellowship Aug 2024

W. R. Thomas Endowed Doctoral Fellowship Aug 2025

Research Experience

Security and Privacy Lab Jan 2022 – *present*

Graduate Assistant, Qinghua Li, *Advisor*

1. Working to develop policy recommendations on the use of big data and AI in critical sectors for the state of Arkansas. This project considers privacy values specific to rural communities not currently expressed in privacy mechanisms or data privacy laws. This is a collaborative project with the UARK Public Policy department.
2. Exploring solutions to balance privacy and transparency in trustworthy AI systems. Current work explores shortcomings of adapting differential privacy in explainable AI systems.
3. Contributed to a project for securing solar grid infrastructure. This is a Department of Energy funded project in collaboration with other schools and UARK departments.

Work Experience

Research Assistant, Technology Privacy University of Arkansas Jan-May 2022

- Worked with Dr. Qinghua Li on a DOE funded project to secure solar energy grids.
- This work was a part of larger collaborative research between 5 research institutions and 3 industry partners
- Project explored security vulnerabilities for solar farms
- Tested different security vulnerabilities for a web application used on the project

Technology Software Intern, Northrop Grumman Corporation Summer 2019-2022

- Developed a regression test framework for updates to B-2 aircraft software
- Worked with a team to develop a database tool for internal career development
- Created and taught software courses for internal career development
- Developed components of a web-based form
- Tested components manual with SQL database entries.

Teaching, Presentations, Talks

Talk, Symposium on Surveillance: “From Surveillance to Visibility”

Apr 2024

- Presented on AI surveillance methods, mitigation techniques, and the role social questions play in further development and mitigation of AI surveillance technologies.
- Discussed AI and its use for surveillance in US immigration program and policing programs
- Discussed how stances in security and privacy critique surveillance behaviors
- Discussed the work of civil society groups in mitigating harmful surveillance behaviors

Digital Humanities Meet Up

Jan 2023

- An interdisciplinary group of faculty and students discussing technology’s overlap with the Humanities.
- Discussed privacy and societal implications of AI
- Described AI fundamentals and how they relate to concerns for AI

Guest Lecturer, Intro to Digital Humanities Course

Sep 2023

- A course on technology’s impact on society.
- Discussed societal implications of AI.
- Crafted practical examples to demonstrate AI behavior.
- Taught how AI models are built.
- Discussed bias and uncertainty in large language models (LLMs)

Extracurriculars, Volunteerism, and Leadership

Queer in AI, policy group

Jan 2024-*present*

- Testified to NIST AI Safety Institute and other US governmental organizations on how AI development practices harm queer communities and industry
- Developing policy explainer for distribution to US legislators on mitigating AI’s use for surveillance, doxing, and harms towards marginalized communities

Trustworthy Machine Learning Reading Group

Aug 2023 - *present*

- Hosts a weekly paper reading series on topics in Trustworthy Machine Learning and AI Ethics (e.g., causality, privacy, security, explainable methods, fairness)
- The impact of this group is about 40 people across different disciplines and levels of AI expertise

Section Member, Symphony of Northwest Arkansas (SoNA)

Jan 2023 – *present*

- Double Bassist for a regional symphony in Fayetteville Arkansas
- A 60-person ensemble from musicians across the US

St. James Food Pantry

Mar 2023 – *present*

- Perform general contracting work
- Handle the registration process and logistical tasks
- Offer technical solutions for handling pantry data

Eagle Scout Rank, Boy Scouts of America

Apr 2017

- Built a gazebo for a local school turned park
- Organized donations and volunteerism from people throughout the community
- Held numerous leadership positions