

ARJUN ARUNASALAM

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PROFESSIONAL SUMMARY

4th-year Ph.D. student leading user-centered research to enhance user experiences by integrating a strong computer science background. Seeking a Summer/Fall 2024 HCI/UX internship.

SKILLS

Methods: Survey Development, Focus Groups/Interviews, Qualitative and Thematic Data Coding, Quantitative and Inferential Analysis, Usability Testing, Data Mining, Web Crawling

Programming Languages and Tools: Python, C++, Go, MATLAB, R, Javascript, Qualtrics

EDUCATION

Purdue University, West Lafayette **May 2025 (Expected , Candidacy - April 2024)**

Ph.D. Student in Computer Science (GPA: 4.0/4.0)

Relevant Coursework: Human-AI Interaction, Data Mining, Information Security

University of Michigan, Ann Arbor

May 2020

B.S.E in Computer Engineering (*summa cum laude*, 3.77/4.00)

RESEARCH PROJECTS AND PROFESSIONAL EXPERIENCE

Graduate Research Assistant - Purdue University, IN **August 2020 - Present**

- Analyzed User Interaction w/ Deceptive Patterns in Data Tracking Permissions Prompts
 - * Designed A/B *survey study* comprising prototype permission prompts with >100 participants.
 - * *Outcome:* Synthesized 4 limitations of mobile permission prompts.
- Verified Mental Wellness Tools for Users
 - * Performed *data crawling* on > 500 webpages to understand expectations for wellness tool.
 - * Designed *audio processing* and *NLP*-based tool to verify user expectations on a wellness track.
 - * *Outcome:* Evaluated synthesized tool with *usability testing* with 28 participants.
- Investigated Refugees' Pain-Points and Countermeasures in Responding to Digital Abuse
 - * Led *interviews* with 11 refugee liasions who work closely with the population.
 - * Conducted *focus groups* and *surveys* for 59 refugees.
 - * *Outcome:* Synthesized 2 pain-points and proposed 3 new countermeasures.
- Explored Online Seller Abuse on E-Commerce Platforms
 - * Performed *data crawling* of 7 online forums and analyzed 10 software tools leveraged for e-commerce abuse among online sellers.
 - * Led *interviews* with 6 online sellers.
 - * *Outcome:* Uncovered 5 abusive tactics of abusive sellers and 4 consequential harms.
- Disseminated *five* research papers through top conferences.

Cloud Security Research Intern - IBM Research, NY **May 2019 - April 2020**

- Participated in research of automated security analytics of cloud microservice applications, contributing to IBM's Code Risk Analyzer project.
- Performed static analysis on Dockerfiles to populate a *Neo4j graph database*, to allow the identification of vulnerable software dependencies.
- Programmed developer *APIs* in *Golang* that interacted with *postgres database*, allowing for retrieval of software package vulnerabilities.
- Developed *back-end framework* for automated remediation of vulnerable Dockerfiles.
- Designed *UIs* using *JavaScript* and *HTML/CSS* to visualize analytic results.

MENTORSHIP AND TEACHING

Mentorship - Purdue University **2020-2023**

- Mentored 4 students in developing and submitting research projects for publication.

Teaching Assistant - Purdue University **2020-2023**

- Led lab/recitations and graded assignments for ~30-40 students, over three semesters.
- Awarded "Graduate Teaching Award" (Oct 2023) for leadership services.

PEER-REVIEWED PUBLICATIONS

Conferences are the primary academic publishing venues for computer scientists.

Conference Publications

* denotes equal contribution

- C5 **Arjun Arunasalam***, Habiba Farrukh*, Eliz Tekcan*, and Z. Berkay Celik
Understanding the Security and Privacy Implications of Online Toxic Content on Refugees [Paper]
Proceedings of the **USENIX** Security Symposium, 2024 (to appear, Acceptance Rate: TBD%)
- C4 Reham Mohamed, **Arjun Arunasalam**, Habiba Farrukh, Jason Tong, Antonio Bianchi, and Z. Berkay Celik
ATTention Please! An Investigation of the App Tracking Transparency Permission [Paper]
Proceedings of the **USENIX** Security Symposium, 2024 (to appear, Acceptance Rate: TBD%)
- C3 **Arjun Arunasalam***, Andrew Chu*, Muslum Ozgur Ozmen, Habiba Farrukh, and Z. Berkay Celik
The Dark Side of E-Commerce: Dropshipping Abuse as a Business Model [Paper]
Proceedings of the Network and Distributed System Security Symposium (**NDSS**), 2024 (Acceptance Rate: 21%)
- C2 Yufan Chen*, **Arjun Arunasalam***, and Z. Berkay Celik
Can Large Language Models Provide Security & Privacy Advice? Measuring the Ability of LLMs to Refute Misconceptions [Paper]
Proceedings of the Annual Computer Security Applications Conference (**ACSAC**), 2023, (Acceptance Rate: 23.3%)
- C1 Andrew Chu*, **Arjun Arunasalam***, Muslum Ozgur Ozmen, and Z. Berkay Celik
Behind the Tube: Exploitative Monetization of Content on YouTube [Paper]
Proceedings of the **USENIX** Security Symposium, 2022, (Acceptance Rate: 17%)