

# ARJUN ARUNASALAM

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## EDUCATION

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### Purdue University

Aug 2020 - May 2025 (Expected)

- Ph.D. Student in Computer Science (GPA: 4.0/4.0)
- Advisor: Professor Z. Berkay Celik
- Research Area: Human-Centered Security and Privacy of Sociotechnical Systems

### University of Michigan, Ann Arbor

Aug 2016 - May 2020

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

## RESEARCH SUMMARY

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4th year CS Ph.D. Candidate in *Human-Centered Security and Privacy*, working under Dr. Z. Berkay Celik at Purdue University with expertise combining (2) qualitative methods and (3) quantitative/statistical research to study end-user interaction with sociotechnical systems.

## RESEARCH PROJECTS AND PROFESSIONAL EXPERIENCE

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### Research Assistant - Purdue University

August 2020 - Present

- Designed *surveys*, *focus groups*, and *interviews* to study refugee interaction with digital abuse.
- Designed *between subjects* user study for ongoing WebVR project.
- Analyzed mental wellness service data using *unsupervised ML* and performed *usability testing* to understand effectiveness of designed digital mental wellness tool.
- Conducted *in-depth literature survey* to curate a misconception dataset and asses large language models' ability to assess misconceptions through collaborative *data annotation*.
- Designed interactive *surveys* to *quantitatively infer* user perception of permission alerts.
- Led *online ethnography* via data crawling to study abuse on content & e-commerce platforms.
- Disseminated research through top-tier academic conference papers (acceptance rates ~15-25%).

### Cloud Security Research Intern - IBM Research

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.

## PROFESSIONAL ACTIVITIES

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### External Reviewer

- Network and Distributed System Security (NDSS), 2023
- IEEE Symposium on Security and Privacy (Oakland), 2023, 2024
- USENIX Security Symposium, 2023, 2024
- ACM Conference on Computer and Communications Security (CCS), 2023

## TEACHING EXPERIENCE

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### Guest Lecturer

- CS590 IoT & CPS Security, Purdue University [Spring 2022]  
*Topic:* User Studies in Security & Privacy Research
- CS390 Greater Issues in Computer Science, Purdue University [Fall 2023]  
*Topic 1:* Misinformation, Disinformation and Fake News  
*Topic 2:* Online Hate and Harassment

### Teaching Assistant

- CS390 Greater Issues in Computer Science, Purdue University [Fall 2023, Spring 2024]
- CS188 Programming w/ Multimedia Objects, Purdue University, [Fall 2020 & 2022, Summer 2021]

## STUDENT RESEARCH ADVISING

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Varun Gannavarappu	B.S. CS, Purdue University → Sandia National Labs	2021-2023
Yufan Chen	M.S. CS, Purdue University → ByteDance	2022-2023
Eliz Teckan	M.S. CS, Purdue University → Vestel	2021-2022
Jason Perry	B.S. CS, Purdue University → Google	2020-2022

\* CS: Computer Science

## PEER-REVIEWED PUBLICATIONS

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*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*,  
Proceedings of the **USENIX** Security Symposium, 2024 (to appear)
- 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*,  
Proceedings of the **USENIX** Security Symposium, 2024 (to appear).
- 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*,  
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* [[Preprint](#)]  
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 Here](#)]  
Proceedings of the **USENIX** Security Symposium, 2022 (Acceptance Rate: 17%)

## Workshop Publications

\* denotes equal contribution

W1 **Arjun Arunasalam\***, Habiba Farrukh\*, Eliz Tekcan\*, and Z. Berkay Celik  
*An Exploration of Online Toxic Content Against Refugees,*  
Usable Security and Privacy (USEC), 2024 [co-located with NDSS 2024]

## INTERESTS AND METHODS

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**Research Interests:** Human Factors, Security and Privacy, UX, HCI

**Methods:** Survey development, Inferential statistics, Qualitative analysis, Usability testing, Focus groups, Interviews, Web crawling, Digital ethnography

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

## AWARDS AND HONORS

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- Recipient of Bravo+ employee award (2024)  
*awarded by Purdue University for noteworthy contribution to department*
- Recipient of Graduate Teaching Award (2023)  
*awarded by Purdue University for teaching services*