Arthur Borem

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SKILLS

Tech: TypeScript, JavaScript, Python, OAuth, React, Node.js, Django, GraphQL, SQL, DynamoDB, HTML, CSS.
Experience: privacy engineering, data subject rights, privacy and security, system design, human-computer interaction, large-scale user studies, A/B testing, privacy tool design, Figma, measurement.

EDUCATION

PhD in Computer Science. University of Chicago. *Chicago, IL.* **09/2021 – 06/2026 (exp)**

Focus: Developed tools and standards for privacy and data subject rights (access and portability) compliance.

MS in Computer Science. University of Chicago. *Chicago, IL.* **09/2021 – 06/2024**

BS in Computer Science. Brown University. *Providence, RI.* **08/2016 – 05/2020**

EXPERIENCE

UChicago Usable Security & Privacy Lab. Research Assistant. *Chicago, IL.* **09/2021 – present**

- Built user-facing technical privacy tools and established best practices on data subject rights compliance, influencing privacy research, engineering, and policy. See "Select Research" below for details.

Data Transfer Initiative. Software Engineer Intern. *Remote.* **07/2025 – 09/2025**

- Led development of and launched Pardner (github.com/dtinit/pardner), a Python package for executing user-authorized transfers of data stored by online platforms, with OAuth 2.0 implementation.
- Enabled compliance with data subject transfer requests by building a utility that translates platform-specific representations of a category of data (e.g., social media posts) into a standardized schema format.
- Built and deployed Django-based web-app for personal data donations for academic research studies, reducing time it takes for a participant to donate their data from days/weeks to milliseconds.

Asana. Software Engineer. *San Francisco, CA.* **06/2020 – 09/2021**

- Launched feature for users to record and post videos with transcripts within Asana (React, GraphQL, AWS) to millions of users by collaborating with Vimeo engineers, earning Fast Company joint-venture award.
- Launched video text-search by indexing transcripts in Elasticsearch, increasing discoverability and adoption.
- Built backend (TypeScript, Scala) for Asana's first AI-powered recommendation system, delivering context-aware suggestions for collaborators, projects, and tasks directly in the text composer UI.
- Led team of three in development of "Do not Disturb" feature; partnered with product, finance, and design by running A/B test to launch the version that maximized engagement and retention.
- Maintained and optimized email infrastructure delivering thousands of emails to millions of users, daily.

Lyft. Software Engineer Intern. *San Francisco, CA.* **06/2019 – 08/2019**

- Reduced enterprise support tickets by deploying a Lyft Business system health REST API (Python, Redis, DynamoDB) by monitoring and aggregating response time latency percentiles and endpoint error rates.
- Iteratively designed API schema via direct collaboration with client support engineers and customers.

Bank of America. Software Engineer Intern. *NY, NY.* **06/2018 – 08/2018**

- Built prototype for in-app iOS chatbot (pre-Erica), initiating the roadmap for conversational banking tools.

RESEARCH (SELECTED)

Data Subject Rights Exploration Platform. University of Chicago. **2024 – present**

- Developed a repository cataloging how 200+ companies respond to data subject access requests (DSARs).
- Designed and prototyped AI Agent to fetch and synthesize personal DSAR user data based on prompts.

Personal Data Annotation Tool. University of Chicago. **2023 – 2024**

- Led team of 4 to build privacy-preserving React-based web-app for users to interact with, visualize, and annotate their personal data obtained from making data subject access requests (DSARs).
- Deployed privacy-preserving data processing pipeline entirely in a user's browser without increasing latency by parallelizing (via web workers) parsing and redaction tasks and using IndexedDB (NoSQL database).
- Eliminated multi-second freezes by paginating large JSON files with thousands of complex nested objects.
- Developed award-winning policy recommendations by analyzing 500+ annotations and DSAR files.

Ad-Blocker Breakage Taxonomy. University of Chicago. **2021 – 2022**

- Published taxonomy of ad-blocker-induced website breakage (e.g., broken login) by scraping and analyzing thousands of user complaints/reviews; as recognized by Brave Browser and uBlockOrigin.

PUBLICATIONS

Kevin Bryson, **Arthur Borem**, Phoebe Moh, Omer Akgul, Michelle L. Mazurek, Blase Ur. "Evaluating and Taxonomizing Ad Transparency Systems." *IEEE Symposium on Security and Privacy (**S&P 2025**)*.

Kelly B. Wagman, **Arthur Borem**, Lan Gao, Marshini Chetty. "Examining Black Older Adults' Perceptions and Use of Digital Voice Assistants for Exercise." *In review.*

Kevin Bryson, **Arthur Borem**, Phoebe Moh, Omer Akgul, Laura Edelson, Chris Geeng, Tobias Lauinger, Michelle L. Mazurek, Damon McCoy, Blase Ur. "Evaluation of Ad Transparency Systems." *Workshop on Technology and Consumer Protection (**ConPro 2024**)*.

Arthur Borem, Elleen Pan, Olufunmilola Obielodan, Aurelie Roubinowitz, Luca Dovichi, Michelle L. Mazurek, Blase Ur. "Data Subjects' Reactions to Exercising Their Right of Access." *USENIX Security Symposium (**USENIX Security 2024**)*.

Galen Harrison, Kevin Bryson, Ahmed E. B. Bamba, Luca Dovichi, Aleksander H. Binion, **Arthur Borem**, Blase Ur. "JupyterLab in Retrograde: Contextual Notifications That Highlight Fairness and Bias Issues for Data Scientists." *ACM Conference on Human Factors in Computing Systems (**CHI 2024**).* **Best Paper Award.**

Alexandra Nisenoff, **Arthur Borem**, Madison Pickering, Grant Nakanishi, Maya Thumpasery, Blase Ur. "Defining Broken: UX and Remediation Tactics When Ad-Blocking or Tracking-Protection Tools Break a Website's User Experience." *USENIX Security Symposium (**USENIX Security 2023**)*.

Arthur Borem, Elleen Pan. "Privacy & Contextual Integrity in a Crowdsourced Gig Work Knowledge Sharing Platform." *Symposium on Applications of Contextual Integrity (**PrivaCI 2023**)*.

Nediyana Daskalova, Eindra Kyi, Kevin Ouyang, **Arthur Borem**, Sally Chen, Sung H. Park, Nicole Nugent, Jeff Huang. "Smartphone-Supported Guidance for Customizable Self-Experimentation." *ACM Conference on Human Factors in Computing Systems (**CHI 2021**)*.

Arthur Borem, Christina Smith. "Developing and Supporting STEM Undergraduate TAs as Partners in Teaching." *IEEE Frontiers in Education Conference (**FIE 2021**)*.

HONORS & AWARDS

Privacy Papers for Policy Makers Student Award. Future of Privacy Forum. **2025**

John Crerar Fellowship. University of Chicago. **2021**

NSF Graduate Research Fellowship Program, Honorable Mention. **2021**

TALKS

Enabling Data Portability in a Research Setting **2025**
DjangoCon US 2025.

Data Subjects' Reactions to Exercising Their Right of Access **2024**
USENIX Security 2024.

Designing a Data Subject Access Rights Tool **2024**
*USENIX Privacy Engineering Practice and Respect (**PEPR 2024**)*.