

Cailyn Hansen

Be Bold, Take Risks, Make Change

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Software engineer exploring the intersection of social justice and technology. Two and a half years of experience in each of: development of full-stack web applications; devops and system administration on Linux; and various programming tools. Solid background in database design, data science, and internet protocols.

Education

Brown University | *Computer Science, B.A. and Ethnic Studies, B.A.* Sept. 2015 – May 2019

- **Select Courses:** Design and Implementation of Algorithms; Logic for Systems; Theory of Computation
- **Computer Science GPA:** 3.63

University of Minnesota-Duluth | *Additional Coursework – Dual Enrollment* Sept. 2013 – May 2015

- **Select Courses:** Honors Computer Science 1, 2; Computer Science Theory; Linear Algebra; Combinatorics
- **Overall GPA:** 3.96

Experience

Software Engineer Intern | *Facebook* May 2018 – Aug. 2018 (Summer 2018)

- Architect and implement configurable multi-channel notifications infrastructure for internal tool
- Restructure testing framework resulting in 11% performance boost across team test suite
- Implement new feature for trans and non-binary users with estimated 55,000 adopting users

Software Developer | *Center for Digital Scholarship, Brown University* Feb. 2017 – Present (Summer 2017)

- Maintain and update existing faculty web application and database projects
- Develop new digital projects through software architecture and data modeling services
- Manage development and production environments on DigitalOcean, Amazon EC2, and local machines

Software Engineer | *Mapping Violence Project, Brown University* Apr. 2016 – June 2017 (Summer 2016)

- Lead team in the design and development of custom data collection and visualization applications
- Perform system administration on Linux servers and test and deploy software using Docker containers
- Communicate technology specifications and progress updates to non-technical team members

Select Projects

Database of Indigenous Slavery in the Americas | <http://bit.ly/disa-github> Feb. 2017 – Present

- Create, iterate, and explain data models for representing unstructured data about slavery
- Develop application with stack consisting of Polymer, Node.js, Hapi.js, Google OAuth, and MongoDB
- Consider possible uses of web semantic technologies, linked open data, and domain-specific ontologies

Mapping Violence Applications | <http://mappingviolence.org> Apr. 2016 – Aug. 2017

- Streamline data collection by building custom MVC web application using Apache Tomcat and jQuery
- Use MongoDB to develop storage solution and manage accounts with Google OAuth and Identity APIs
- Expose data via REST-like JSON API with SparkJava and use API with Leaflet.js to create visualizations
- Design and implement custom date format to handle ambiguity and imprecision in archival research

Database | *Intro to Systems* Dec. 2016

- Implement in C a multi-threaded database server with both UDP and TCP connections
- Use POSIX Threads to enable concurrent client connections and mutexes to perform fine-grained locking for safe access; and properly handle system signals for clean disconnect

Leadership Experience

President | *Undergraduate Parliament, Alpha Delta Phi Society* Mar. 2018 – Present

- Advise chapter presidents, chair monthly meetings, organize events, and liaison with national officers

Undergraduate Teaching Assistant | *Computer Science, Brown University* Nov. 2016 – May 2017

- Hold TA hours and answer questions on Piazza to facilitate student comprehension and learning

Interests

Spontaneous Road Trips, Recipe-less Cooking & Baking, Late Night Conversations, Digital Humanities