

# Samantha Walkow

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## CITIZENSHIP

Canadian

## EDUCATION

2018 - Present      **PhD in Informatics**, University of Illinois at Urbana-Champaign  
*Doctoral Advisor: Dr. Matthew Turk Anticipated graduation: May 2024*

2014                  **B.S., Psychology**, Purdue University  
2014                  **B.A., Sociology**, Purdue University

## RESEARCH INTERESTS

- Understanding motivations, practices, and labor behind using and re-purposing computational software tools for scientific inquiry.
- How to improve and re-factor currently existing software to incorporate modern designs and functionality.
- Investigating how open source software communities interact, build, and sustain scientific software tools.

## AWARDS, SCHOLARSHIPS AND FELLOWSHIPS

2018 – Present                  Humanities, Arts, Science, and Technology Alliance and Collaboratory  
   ([HASTAC](#)) Scholar

January – May 2019              Mozilla Open Leaders Program - [Culture Track Participant](#)

## RESEARCH EXPERIENCE

2018 – Present      **Graduate Research Assistant, Data Exploration Lab**  
<https://data-exp-lab.github.io/>  
<https://github.com/data-exp-lab>  
Department of Informatics, University of Illinois at Urbana-Champaign  
Principal Investigator: Dr. Matthew Turk

- Investigate and develop open source libraries involved in loading, representing and visualizing natural sciences data.
- Work closely with the open source communities to expand the codebase, learn about the community dynamics, and learn to understand the open source development process.
- Work closely with a multidisciplinary team to understand software needs and habits.
- Investigate and design studies to better understand mental models involved in describing scientific data representation and visualization.
- Work to describe and understand the data analysis visualization process in various computer programming paradigms.
- Work on the [yt project](#) to expand functionality across scientific domains

2014-2015

**Independent Research Project**

**Developmental Studies Lab, Purdue University**

Co-Author: Kayla Donaldson

- Designed and proposed a research project focusing on sleep habits of preterm infants
- Applied ANOVA, multiple regression and descriptive statistics for project
- Wrote a formal research paper to be transferred to a poster format and presented at Purdue University Science Symposium

2013-2014

**Research Assistant, Developmental Studies Lab**

Purdue University

Principal Investigator: Dr. AJ Schwichtenberg

- Collected data through online and paper surveys for a study focusing on sleep habits and their relationships to the onset of autism in infants
- Created surveys through online software (Qualtrics)
- Prepped paperwork and interview area for participants
- Recorded sleep habits with the use of video recorder, actigraphs, and analyzed data

**PROFESSIONAL EXPERIENCE**

2020

**Graduate Assistant, Interdisciplinary Health Sciences Institute**

University of Illinois at Urbana-Champaign

Direct Supervisor: Dr. Gillian Snyder

- Worked closely with administrators and computer programs to design and implement a database in a data capture system called REDCap for the purpose of storing and tracking COVID-19 public survey data and test results.
- Programmed scripts in python to send data back and forth between databases with the REDCap API, including a relational database and a medical record software.
- Coordinated with multiple teams to send and receive data securely, using the JSON format.
- Coordinated with multiple teams and stake holders at the University of Illinois to define project priorities and scope.

2015-2018

**Coordinator, Research Data Management**

British Columbia Children's Hospital, Vancouver, Canada

Direct Supervisor: Dr. Elodie Portales-Casamar

- Understood REDCap software (electronic data capture program) on a user and administrator level
- Contributed to the REDCap Community website and knowledgebase
- Provided training and support for research teams working in REDCap
- Managed and updated BCCH Data Management and REDCap training website
- Coordinated REDCap software validation for version updates
- Planned and coordinated the BCCH Data Management Communications effort
- Learned and evaluated several different Electronic Lab Notebook software including Labguru, SciNote and ELabFTW
- Provided support and training for the REDCap Mobile App

**CONFERENCE PRESENTATIONS**

**Oral Presentations**

- 05-2020      *Building a Sustainable Domain Knowledge Framework for Natural Science Software Tools*  
 Presenter, What Is Information? Cyberconference hosted by the University of Oregon  
 Location: Online
- 10-2019      *Developing a Cross-Domain Grammar of Analysis of Volumetric Datasets*  
 Co-Presenter, iSchool Research Showcase, University of Illinois at Urbana-Champaign  
 Location: Urbana, Illinois
- 08-2018      *Build-My-Calc, REDCap Creative Use Cases*  
 Presenter, REDCap Conference 2019  
 Location: Chicago, Illinois

### **Poster Presentations**

- 2020      *Using Domain Storytelling to Develop a Context Aware Framework to Support Interdisciplinary Scientific Inquiry in yt*  
 SciPy (Scientific Computing with Python) 2020  
 Location: Online
- 2019      *Interdisciplinarity in Data Analysis: Reference Implementations of Domain Context Systems in yt*  
 SciPy (Scientific Computing with Python) 2019  
 Location: Austin, Texas
- 2018      *The yt Project: Visualizing and Analyzing Volumetric Data Across Domains*  
 Midwest Big Data Hub All Hands Meeting  
 Location: Cleveland, Ohio
- 2016      *British Columbia Children's Hospital Admin Toolbox*  
 Poster presenter and Winner for best poster, REDCap Conference 2016  
 Location: Charlotte, North Carolina

### **TECHNICAL EXPERIENCE**

- Proficient in Python
- Proficient in R

### **COMMUNITY TEACHING EXPERIENCE**

#### **Athletic teaching and coaching experience**

- 2015      **Support Worker**, Canucks Autism Network, Vancouver, Canada
- Worked one on one with children with Autism on basic developmental skills through sports
  - Assisted head coach in implementing the lesson plan
- 2013-2014      **Volunteer Assistant Track and Field Coach**, Purdue University
- Worked with head coach to implement workouts and plan and coordinate track meets
  - Worked with collegiate athletes to gain fitness and perform in various events at competitions

## REFERENCES

Dr. Matthew Turk, PhD  
Assistant Professor, School of Information Sciences  
Research Assistant Professor, Department of Astronomy  
Faculty Affiliate, National Center for Supercomputing Applications  
mjturk@illinois.edu

Dr. Elodie Portales-Casamar, PhD  
Clinical Assistant Professor, Division of Allergy & Immunology, Department of Pediatrics,  
University of British Columbia  
Clinical Research Informatics Lead, British Columbia Children's Hospital  
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