

Scott Cambo

PhD Student in Technology and Social Behavior
832 Hinman Ave, Apt. 3N, Evanston, IL 60202

December 15, 2017

www.scottallencambo.com

Education

- **Northwestern University** Evanston, IL
PhD Student *Started 2014*
 - Joint PhD in Computer Science and Communication
 - Advised by Professor Darren Gergle
 - GPA : 3.98
- **Cornell University** Ithaca, NY
B.S. Information Science *2011 - 2014*
 - Concentration in Information Systems and Human-Centered Systems
 - Minor in Cognitive Science
 - Graduate with Honors Distinction in Research
- **Holyoke Community College** Holyoke, MA
Liberal Arts And Sciences *2010 - 2011*
 - GPA : 4.0

Publications & Presentations

- Cambo, S.A., Gergle, D., (Forthcoming), User-Centered Evaluation For Machine Learning. *Human and Machine Learning* book chapter
- Cambo, S.A., Avrahami, D., Lee, M., (2017), BreakSense: Combining Physiological and Location Sensing to Promote Mobility during Work-Breaks *Proceedings of CHI 2017*
- Lin, K., Spindell, H., Cambo S., Kim, Y., Zhang, H., (2016), Habitsourcing: Sensing the Environment through Immersive, Habit-Building Experiences. *Proceedings of the 2016 Annual ACM Symposium on User Interface Software and Technology (UIST)*
- Cambo, S.A., Gergle, D., Interactive Active Learning for Self-Tracking in mHealth *Workshop paper presented at the SIGCHI 2016 workshop on Human-Centered Machine Learning*
- Cambo, S.A., Gergle, D., Interactive Active Learning for Understanding Workplace Systems And The Potential Problems They Invite *Workshop paper presented at the CSCW 2016 workshop on Algorithms At Work*
- Cambo, S.A., Calderon, N., Lazarus, C., Stern, R., Measuring the Skills Gap with Job Postings and Resumes From CareerBuilder, *Data Science For Social Good Fellowship Presentation at SIGKDD 2014*
- Ahmed, S., Cambo, S.A., Lagoze, C., Velden, T, (2013), Toward a mesoscopic analysis of the temporal evolution of scientific collaboration networks. *Proceedings of the iConference 2013*

- Velden, T., Cambo, S.A., Ahemd, S.I., Lagoze, C., (2013) Toward a Time-Sensitive Mesoscopic Analysis of Co-Author Networks: A Case Study of Two Research Specialties, *Proceedings of ISSI 2013*

Awards

- **Data Science For Social Good Summer Fellowship** Chicago, IL
Research Fellow Summer 2014
 - Worked with Conservation International to model animal migration based on motion activated camera trap data
 - Work with CareerBuilder and Skills For ChicagoLand’s Future to form a novel method of measuring the gap between the supply and demand of skills in the Chicago job market.
- **Segal Design Fellowship** Evanston, IL
Research Fellow Fall and Spring 2017
 - Worked with Stephen Schueller from the Center for Behavioral Intervention Technology and my advisor, Darren Gergle to understand how active learning can improve accuracy and change the user experience for mood tracking technologies

Research Experience

- **FX Palo Alto Laboratories** Palo Alto, CA
Graduate Research Intern Summer 2016
 - Hosted by Daniel Avrahami and Matt Lee, I have led a research project which seeks to understand how to design a workplace system which uses gamification of impromptu work break time activities to further health and well-being goals
- **CollabLab** Evanston, IL
Graduate Research Assistant Fall 2014 - Present
 - Collaborated with the Center for Behavioral Intervention to conduct a mixed methods study of people living with depression and their use of self-tracking technology. Collected data in the form of continuous mobile phone sensor data, twice daily experience sampling surveys, and weekly interviews. Analysis is ongoing.
 - Worked on *Google grant project* developing full stack system for managing large scale deployment of SMS text message based experience sampling surveys and responses
- **Delta Lab** Evanston, IL
Lab Rotation April - September 2015
 - Iteratively developed an iOS application designed to help spectators track and cheer runners during a race
 - Built an iOS programming framework to help developers build applications that use audio-based narrative and speech-to-text interaction to facilitate immersive experiences for behavior change and citizen science
- **Cornell Social Media Lab** Ithaca, NY
Undergraduate Research Assistant Fall 2012 - Summer 2014

- Maintained and extended an Android application designed to collect data on deceptive text messaging
- Used combination of machine learning and natural language processing techniques to study deceptive text messaging. This work was used in my honor's research thesis.
- Developed an Android application and web application to collect and store phone usage data such as text messages, phone calls, location, and app usage as well as administer twice daily ecological momentary assessment surveys
- Developed a fake social media platform for studying how social norms affect the decisions that users make regarding their privacy settings.

- **Social Network Analysis with Theresa Velden**

Ithaca, NY

Undergraduate Research Assistant

Summer 2012 - Winter 2012

- Wrote shell scripts for batch processing co-citation network data downloaded from arxiv.org
- wrote python scripts for analyzing temporal co-citation networks and how authors become a part of the main components of the network
- Presented a post of the above work at iConference 2013
- A full paper of this work entitled *Toward a mesoscopic analysis of the temporal evolution of scientific collaboration networks* was accepted to the International Society for Scientometrics and Informetrics.

Teaching Experience

- **Northwestern University**

Evanston, IL

Curriculum Development

- Working with Professor Bryan Pardo, I have designed a curriculum for teaching a graduate seminar called *Human-Centered Machine Learning* which aims to connect research in Human-Computer Interaction with research in Machine Learning such that computer science graduate students can understand how machine learning algorithm design affects a broad sociotechnical system and human factors researchers can understand the technical details of how computational intelligence affects user experience and social processes. You can see a draft of the curriculum at https://github.com/scottofthescience/hcml_course.
- Professor Jeremy Birnholtz started a workshop series called *Computing Everywhere* for undergraduates of varying disciplines to learn more about computer science. As an instructor for Computing Everywhere, I have designed curriculum for 2 two-hour workshops and 1 four-hour workshop.
 - * *Social Web Programming* is a 4-hour workshop I designed to teach students of nearly any background how to start participating in open-source as a way of learning to program. The workshop explains the philosophy of open source and aims to help students understand how, despite popular belief, participation in the community does not presuppose programming expertise, but can actually be a great way to get it. All students download the template project using GitHub, create "learning" branches, and learn by interacting with the code in the javascript console. This class also incorporates elements of [mob programming](#) to see how programming with others can lead to a better understanding of software engineering.
 - * *Algorithms Everywhere* is a two-hour workshop I designed along with Mike Devito in which we discuss the pervasiveness of algorithms in modern media and society. Students also get hands on experience with the subjective decisions made while designing algorithms for music recommendation by using [a web app](#) and a worksheet to learn the

k-nearest neighbors algorithm. This workshop was designed for anyone regardless of computational or programming experience.

- * *Build a Bot* is a two-hour workshop I designed along with Robin Brewer in which students get a high level understanding of various designs for chat bot systems as well as hands on experience with designing chat bots using API.ai (now known as Google's DialogFlow).

- **Northwestern University**

Evanston, IL

- *Graduate Teaching Assistant*

Fall 2014

- Assisted a graduate seminar called *Social Network Analysis* taught by Professor Noshir Contractor. Responsibilities included creating, debugging, and grading weekly assignments, grading final projects, and holding weekly office hours.
- Assisted a cross-institutional multi-disciplinary course for graduate and master's students called *Data as Art*. This course was a collaboration between engineering students at Northwestern's McCormick School of Engineering and art students at the School of the Art Institute of Chicago. Responsibilities included holding weekly office hours, assisting project teams to think about data from the perspectives of a data scientist and an artist. Team projects resulted in a display at the School of the Art Institute

- **Cornell University**

Ithaca, NY

- *Undergraduate Teaching Assistant*

Fall 2012

- Supported both *Introduction to Computer Science with Python* and *Transition to Java*
- Responsibilities included office hours held twice weekly as well as grading both exams and assignments

Skills

- **Research:** Quantitative Analysis using Machine Learning, Experience Sampling, Mixed Methods techniques
- **Data Science:** Text analytics, natural language processing, supervised and unsupervised machine learning, semi-supervised machine learning (particularly active learning)
- **Programming:** Python (preferred), Java/Android, javascript, R, Objective C, Swift, C++, Unix Shell scripting
- **Full Stack Application Development:** Flask web framework (python), SQL databases (Postgres, MYSQL), NoSQL javascript, jQuery, HTML, CSS, Bootstrap, Heroku
- **Mobile Application Development:** 3 years of experience with Android, 1 year of experience with iOS. Focus on background passive data collection and designing experience sampling notifications (see my CHI '16 publication).
- **Version Control:** github.com/scottofthescience. bitbucket.org/scottofthescience for when I run out of free repositories. I use some form of version control on nearly all my projects and have taught most undergraduates who have worked with me to use version control effectively.
- **Hardware:** Mostly a hobby. I have hacked and built devices using Raspberry Pi, Arduino.
- I have worked with a variety of teams ranging from a medical research laboratory (Center for Behavioral Intervention Technology) to computational social science project teams to communication research teams to human-computer interaction laboratories. As a result, I can work with and have respect for people with a wide very skills and backgrounds.

- I gained much of my development experience by being asked to build something and refusing to give up until a solution has been found. As a result, I can build most any application

Other Life Experience

- **Previous Careers:** Custom Cabinetry and woodwork & General Contracting (8 years), Rock climbing instructor (1 1/2 years), musician, sound engineer, & concert booking (10 years, 100+ concerts)
- **Volunteer work:** volunteer for the Central Massachusetts Arts Assembly (4 years), Chairman of the Board of Directors of the Central Massachusetts Arts Assembly (2 years).