Course Credit:
Research Practicum registration #: 389 (COMM_ST) or
Independent Study registration #: 399-0 (IEMS)

Duration:
Fall 2018 (possibly extendable to subsequent quarters)

Location:
SONIC Lab, Frances Searle Building 1-459
2240 Campus Dr.
Evanston, IL 60201

Organization Overview:
The Science of Networks in Communities (SONIC) research group advances social network theory and
methodology through the development of cutting-edge techniques to understand and enable networks
in diverse communities. For more information, please visit http://sonic.northwestern.edu/about.

Internship Opportunities:
SONIC is excited to offer 4 internship opportunities this quarter:
- Network Experiment Coordinator
- Machine Learning on Enterprise Social Media Internship
- Social Media Intern
- Machine Learning for NASA Crew Prediction

Details and descriptions are below.

Application Instructions:
To apply, complete the application form found here: https://goo.gl/forms/701VdCJSAtOqvIWM2. Then,
send a resume and brief cover letter describing your interest in the position to Michael Schultz
(michael.schultz@northwestern.edu) no later than Tuesday, October 2, 2018.

Requirements:
Data Science Internships are open to current undergraduates enrolled in an accredited degree-seeking
program at Northwestern. Candidates must be able to demonstrate attention to detail, proficient
writing/communication skills, analytic thinking, emphasis on deadlines. Many projects require
candidates to have at least basic knowledge of programming or statistical software. For project specific
requirements and preferences, see descriptions below.
Network Experiment Coordinator

Internship Description:
The Network Experiment Coordinator will work closely with a research team that is conducting an experiment using 6-DoS (https://bit.ly/2JTQy08) to investigate how network cognition is built and used. 6-DoS is a web application based on the setup of Milgram’s “six degrees of separation” experiment. The purpose of this experiment study is to determine how individuals route messages in their social group. In the study, because of the nature of 6-DoS, the team is recruiting social groups consisting of at least 15 participants who somewhat know each other. The coordinator will be actively involved in recruiting participants and conducting the experiment and will be given the opportunity to work toward co-authoring a paper for an academic conference or journal.

Preferred Qualifications:
Ideal candidates will have a strong interest in research on psychology or social network analysis and be interested in pursuing graduate school. Candidates who have been having experience of conducting social experiments will be ideal.

Machine Learning on Enterprise Social Media Internship

Internship Description:
Many companies have started using Enterprise Social Media platforms (Slack, IBM Connections, Microsoft Teams, etc.) in order to help their employees share information. The intern will be involved in using data on digital activity from Enterprise Social Media in order to predict social relations amongst individuals in a company. This will involve developing machine learning models to perform node labeling, link prediction, or text analysis. It may also involve the use of social network analysis methods to understand patterns of social connections and social interactions.

Preferred Qualifications:
Ideal candidates will have a strong interest in machine learning or social systems research, and experience with programming languages such as Python or R. Prior knowledge of machine learning or social network analysis is highly preferred.
Social Media Intern

Internship Description:
The intern will work members of the lab to help disseminate social networks research and increase the visibility of research activities. Intern will be responsible for curating content on our website and social media, monitoring interest using web traffic analytic tools, and providing creative solutions to improve engagement with the academic community.

Preferred Qualifications:
Ideal candidates will have a strong interest in social research or social network analysis and will have some experience with WordPress, Google Analytics, and/or web design.

Machine Learning for NASA Crew Prediction

Internship Description:
In preparation for their planned mission to Mars, NASA is studying crew member interactions using ground-based space flight analogues. This project aims to model the interactions of the analogue crew members during a team task in order to predict relationship dynamics between crew members. This intern will work a team of engineers and psychologists to develop machine learning models that predict relationship outcomes from their past interactions and communications. This work will require extracting features from conversations using text analysis and modeling patterns of social connections and social interactions using social network analysis.

Preferred Qualifications:
Ideal candidates will have a strong interest in machine learning/deep learning or social systems research, and experience with programming languages such as Python or R. Prior knowledge of machine learning/deep learning or social network analysis is highly preferred.