VT EPSCoR SOCKS Summer Research Internship

2027 Research Topics

(1) Social Media Sentiment and Population Movement Narratives

Mentor: Pablo Bose

Research Description: In this internship you will work with researchers to examine how sentiment and communication patterns surrounding population dynamics and regional settlement patterns have evolved globally since 2010. While prior studies have often emphasized discrete events, this work seeks to identify the broader dynamics that influence how such issues are discussed and understood.

We will focus in this project on a series of datasets from X/Twitter, Reddit, Bluesky and Wikipedia and analyze these using SOCK tools such as Storywranger 2.0 and WikiWrangler as well as topic modeling techniques such as BERTopic to quantify and visualize shifts in communication patterns across international, national, and local levels. The project integrates computational methods from data science with interpretive approaches from the social sciences to assess variation in tone, framing, and attention over time. Findings will contribute to a clearer understanding of how collective attitudes toward population dynamics, community adjustment, and support mechanisms are formed and communicated in the digital public sphere. Results are expected to inform future cross-sector research on communication networks, dialogue, and the community-level outcomes of large-scale population change. Your task in this internship will be to work primarily on aiding researchers with analysis and supporting/preparing for publication.

Ideal Candidate: Someone who has experience with mixed-methods research, with a knowledge of some qualitative and quantitative skills. Coding experience is fine but secondary. Experience with social media or LLM research is definitely a plus. I don't need people who know how to code but I need people who know how to think widely and deeply, are open to innovative ideas and approaches and are especially prepared for the transition from primary research to analysis and publication because that's the phase we are moving into. 1 intern.

(2) Indigenous Narratives and Storytelling in Global Environmental Governance

Mentor: Kemi Fuentes-George

Research Description: Since 1992, international institutions in biodiversity and climate have sought the "full and effective participation" of indigenous people in environmental governance. From the perspective of these organizations, greater Indigenous participation will allow these institutions to draw from a broader pool of environmental knowledge and create mechanisms for conservation and management that are inclusive of local needs. However, the kinds of knowledge claims that international institutions privilege do not often make space for Indigenous ways of understanding nature, which often encompass narratives of nature as sacred, as an ancestor, or as shaped by cultural interactions by local communities. This research project examines how stories by Local Communities and Indigenous People (LCIPs) are incorporated (or not) in environmental management protocols, and how those shape what we understand as “full and effective participation.”

Ideal Candidates: Someone who has done research or had training (classes etc.) on Indigenous and/or tribal narratives about the environment are preferred. 4 interns.

(3) Understanding and Promoting Human Connection in Serious Illness

Mentor: Bob Gramling

Research Description: Student SOCKS researchers will participate in team science under Dr. Gramling's guidance within the Vermont Conversation Lab. The focus will be on developing, evaluating and improving observable conversation markers of human connection between patients, families and clinicians. For example, some of our ongoing work includes the measurement and characterization of times in conversations when people stop talking to better understand what these moments might be able to tell us about forms of therapeutic connection. The student will join an ongoing interprofessional team of scientists in the VCL and learn methods of human coding (labeling) audio/video to validly and reliably identify key conversational moments and computational approaches to developing scalable measures that can be applied to larger samples of observations.

Ideal Candidate: No specific methodological skill is required, just openness to learning, contributing to a team, and investigating human connection in clinical settings. I will be looking for characteristics of curiosity and humility. 1 intern.

(4) What do Translation Systems Learn About Languages?

Mentor: Brennan Dell

Machine translation (MT) has progressed to impressive levels of quality and is now available for hundreds of languages. However, it remains unclear how well these models perform in the details, especially on difficult linguistic phenomena, and languages different from English. In my research, I apply the techniques of linguistics to measure the abilities of MT systems to translate difficult phenomena. A common difficulty occurs when there are linguistic differences between the languages. One such difference that I have researched is that of evidentiality, or the expression of whether a speaker has direct or indirect evidence for an event. In Turkish, evidentiality is expressed in the verb conjugation, whereas in English, it is expressed optionally with adverbs (*apparently, supposedly)*. To translate between English and Turkish, a model must use cues from the context to figure out what form of evidential language is appropriate. Therefore, by evaluating evidentiality, we can learn more about how well MT systems can process cues from the context.

Interns working with me will use similar methods to understand what MT systems and Large Language Models learn about language. Past interns have investigated the translation of Spanish pronouns, and idiomatic expressions in French. Interns will have the opportunity to research how LLMs learn languages and linguistic phenomena which interest them. In the process, interns will gain familiarity with Python programming, working with language models, techniques of natural language processing, and linguistics research.

Ideal Candidates: Programming/Python experience is helpful, but not required. Having experience in a second language or linguistics is a big plus. 2 interns.

(5) Understanding the Student News Landscape

Mentor: Benjamin Cooley

Research Description: Students will use a one-of-a-kind database developed by the Center for Community News to analyze the themes and topics covered by student journalists around the country. This database contains over 60,000 stories and growing as it scrapes news stories every day from over 950 publications throughout the year. Specifically, we are interested in students who would like to analyze the data around specific events such as the 2026 general election, major sporting competitions, significant student issues such as Title IX lawsuits, etc.

Ideal Candidates: Some computational skills necessary. Show a particular interest in data visualization and are generally interested in working with quantitative data. Preference for students with some coding skills and some knowledge of natural language processing methods. 2 interns.

The following mentors have not yet determined their project for the summer 2027 internship. Below is a general description of their field of study and/or their project description from summer 2026.

(6) Using Large Language Models (LLMs) in Linguistics

Mentor: Julia Zimmerman

Research Description: This research area applies large language models, natural language processing, and other computational tools to open questions in linguistics. Past projects in this vein have explored topics such as how context shapes word meaning by comparing internal LLM representations (e.g., layer-specific embeddings and attention patterns), what sort of information is accessible to and learned by LLMs, and what forms their internal states. The specific project for this year has not yet been finalized but will fall within this same general space. Interns will use LLMs and computational/NLP methods to investigate a specific question in linguistics involving hands-on programming and quantitative analysis of language data.

Ideal Candidate(s): interest in AI, LLMs, and linguistics; Python programming experience; familiarity with NLP/ML tools (e.g., text parsing, regex, classification, embeddings); comfort with fundamental statistics and/or linear algebra.

(7) Mental Health Discourse through Media and Diagnostic Language

Mentor: Alice Patania

Research Description: This research project investigates how mental health has been discussed and represented. Using natural language processing (NLP) techniques, the project analyzes large-scale textual data from media sources and editions of the Diagnostic and Statistical Manual of Mental Disorders (DSM). The goal is to trace changes in language, stigma, and framing of mental health topics across time, identifying key shifts in public discourse and clinical terminology. The project combines historical data gathering with computational analysis to uncover patterns and trends in how society understands and communicates about mental health.

Ideal Candidate: Someone who knows how to code in Python. 1 intern.

(8) Digital Anthropology: Project TBD
Mentor: Michelle Morgenstern

(9) Examining Mental Illness Storytelling on Social Media
Mentor: Ellen Kozelka

(10) Philosophy and Ethics: Project TBD
Mentor: Randall Harp

Stay tuned for more projects and mentors to be added throughout Fall 2026.