Stefan Inzer

424-409-1694 | stefan.inzer@gmail.com | linkedin.com/in/stefan-inzer | stxnre.github.io

Education

University of Washington — Seattle, WA
Ph.D. in Statistics — *September 2024 – 2029 (expected)*

University of California, Berkeley — Berkeley, CA
B.A. in Applied Mathematics, Highest Distinction — *Aug. 2020 – Dec. 2023*

Technical Skills

Technical: Python, R, SQL, Git, MATLAB, VS code
Libraries: pandas, NumPy, Scikit-learn, Scipy, SpaCy, Tensorflow, Pytorch
Interests: Machine Learning, Time Series Analysis, Feature Representations, Natural Language Processing

Experience

Research Data Analyst — Sep. 2022 – Present
UCLA AI and Cultural Heritage Lab

- Work on various research projects in computational linguistics with Professor Todd Presner
- Wrote code to compare transcripts based on categorical time series data involving topic spoken, attempting to identify anomalous testimonies among a sample of 1,000 testimonies of similar duration.
- Used OpenAI API to generate semantic triples and resolve ambiguous pronouns or anaphora present in interview transcripts, with the aim of creating a graph-based index of testimonies.

Research Experience for Undergraduates — *May 2022 - Aug. 2022*

- Used Python to develop a machine learning pipeline to extract and analyze semantically rich information from 984 complete Holocaust survivor testimonies from the USC Shoah Foundation Visual History Archive, through topic modeling and semantic triplet extraction.
- Adapted BERT and Bi-LSTM recurrent neural network models to extract subject-relation-object semantic triples from sentences. Achieved competitive performance over rule-based methods.

Research Intern — June 2023 – Aug. 2023
Institute for Pure and Applied Mathematics

- Collaborated with three other students in an industrial research project sponsored by The Aerospace Corporation for the Research in Industrial Projects for Students (RIPS) Summer 2023 program.
- Trained and validate discrete Gauss-Markov model for time series position and clock error of GPS satellites, comparing real-time GPS orbit predictions with precise retrospective orbit measurements. Reinforced model with L1 penalty regularization.
- Drafted a final report of the result and delivered a presentation to an audience of academic and industry researchers at IPAM. Additionally submitted results for inclusion in 2024 Joint Mathematics Meetings (JMM) conference.

Projects

Multi-scale Hybridized Topic Modeling | *Python* — November 2022

- Co-authored research paper on a novel, hierarchical approach to topic modeling, using BERTopic and Non-negative Matrix Factorization, to analyze unstructured text datasets, primarily interviews.
- Implemented approach on a subset of the USC Shoah Foundation Holocaust survivor testimonies and the MediaSum dataset, containing over 460,000 news interview transcripts from NPR and CNN.
- Results published in SIAM Undergraduate Research Online and available at https://www.siam.org/Portals/0/Publications/SIURO/Vol16/S153683R.pdf?ver=2023-03-24-111332-970.

Cinematic Arts and Production Club (CAP) | *Treasurer* — Aug. 2020 – Dec. 2023

- Compiled club financial records and raised $4500 in funding for 2023-2024 academic year.
- Facilitated communication between CAP and university.
- Coordinated with the Director of External Affairs to arrange external sponsorships
- Led 5 post-production development sessions for 200+ new members from 2021 thru 2023