Stefan Inzer

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EDUCATION

University of Washington, Seattle, Seattle, Washington — September 2024–present
Ph.D. in Statistics (Incoming Student)

University of California, Berkeley, Berkeley, California — December 2023
Bachelor of Arts, Applied Mathematics (conc. Data Science)
GPA: 4.00/4.00, Junior Inductee to Phi Beta Kappa

SKILLS

Technical: Python, SQL, R, MATLAB, JupyterLab, Microsoft Excel and Word
Python Libraries: Numpy, Pandas, Matplotlib, Scikit-learn, Scipy, SpaCy, PyTorch, TensorFlow
Interests: Machine Learning, Time Series Analysis, Feature Representations, Natural Language Processing
Language: Japanese up to advanced level (JAPAN 100B)

EXPERIENCE

Research Intern, Institute for Pure and Applied Mathematics — Summer 2023

- Collaborated with three other students in an industrial research project sponsored by The Aerospace Corporation for IPAM's 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.

Research Experience for Undergraduates, UCLA CAM — Summer 2022–present

- 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. Achieve competitive performance over rule-based methods.
- Perform ongoing machine learning linguistics research during the academic year with Professor Todd Presner and the Holocaust Research Lab at UCLA.

Treasurer, *Cinematic Arts and Production Club (CAP)* — September 2020–May 2023

- Used Excel and Notion to compile and audit club financial records. Facilitated communication between CAP and university, raising $4500 in funding for 2023-2024 academic year. Coordinated with the Director of External Affairs to arrange external sponsorships
- Collaborated creatively with students to write, direct, and edit 12 short films.
- Led 5 post-production development sessions for 200+ new members from 2021 thru 2023

ADDITIONAL PROJECTS

Multi-scale Hybridized Topic Modeling — Fall 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.