Hillel Steinmetz

Applied Scientist and
Machine Learning Engineer

Experience

Qualtrics   May 2024 – Present

Speech Engineer II (L4) | Reston, VA

- Prepared migration from transcription service to in-house ASR engine, reducing associated costs by 60+%
- Developed support tools to query MongoDB and migrate files on AWS S3 buckets in **Go**, **Bash**, and **Python**

National Aeronautics and Space Administration (NASA)   Jun 2023 – Dec 2023

AI & Machine Learning Intern | Mountain View, CA (remote)

- Spearheaded research on the use of natural language understanding to automate and modernize legacy air traffic control systems by generating visual taxi instructions directly from radio communications
- Built an extensible **Python** codebase to preprocess **JSON** text data, and train and evaluate machine learning models using configuration files, streamlining research into model architectures
- Received the Shining Star Intern Award in recognition of my contributions to the digital taxi project

Smart Information Flow Technologies (SIFT)   Jun 2022 – Mar 2023

NLP Research Intern | Minneapolis, MN (remote)

- Trained and optimized a span-level sentiment analysis model to detect disinformation and influence campaigns on social media using the **Transformers** and **PyTorch** packages for **Python**
- Researched and implemented methods to remove bias from the model, including contrastive learning and the regularization of attentional entropy, contributing to a conference paper
- Developed a CI/CD pipeline in **GitLab** and **Docker** to ensure repository updates remain compatible with dataset schema and a downstream data visualization tool

Saggezza   Nov 2020 – Nov 2021

Technical Writer | New York, NY (remote)

- Published 50+ software documentation pages for 5+ products for an S&P 100 financial services firm
- Collaborated with product owners to design documentation portals for readability and navigability

Skills

Programming Languages: Python (advanced), R, Bash, HTML/CSS, JavaScript (novice), Go, C (novice)
- **Python packages**: PyTorch, Transformers (Hugging Face), LangChain, Deepspeed, NLTK, NumPy, spaCy, pandas, Matplotlib, scikit-learn, gensim, Prodigy, Pytest

Tools: Git, Jira, CI/CD, Linux, Docker, AWS, SQL (novice)
Natural Languages: Hebrew (advanced), French (intermediate)

Education

University of Washington | MS in Computational Linguistics | Seattle, WA   Sep 2021 – Jun 2023
Awards: Ryan Neale Cross Memorial Fellowship

University of Chicago | BA in Linguistics | Chicago, IL   Sep 2015 – Jun 2019
Awards: Leonard Bloomfield Prize in Linguistics, Phi Beta Kappa

Publications

Conference Proceedings	Hillel Steinmetz, Jacob Tao, Stephen Clarke, Krishna Kalyanam. 2024. "A Natural Language Understanding Approach for Digitizing Aircraft Ground Taxi Instructions". *AIAA AVIATION*. Las Vegas, USA. (Forthcoming, August 2024). Scott Friedman, Joan Zheng and Hillel Steinmetz. 2024. "[Debiasing Multi-Entity Aspect-Based Sentiment Analysis with Norm-Based Data Augmentation](#)". In *Proceedings of the 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING '24)*. Turin, Italy. International Committee on Computational Linguistics.
Master's Thesis	*Transfer Learning Using L2 Speech to Improve Dysarthric Speech Recognition* Supervisor: Professor Gina-Anne Levow