Maria Teleki

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Summary

Howdy! I'm a third-year PhD Student in Computer Science at Texas A&M University (gig em!) in InfoLab, advised by Prof. James Caverlee. My work focuses on disfluency in spoken content – *How do disfluencies impact LLM task performance? How does the choice of ASR system impact a model's ability to identify disfluencies?* Additionally, I work on algorithms that identify and mitigate gender bias in language models. **Keywords: *Disfluency, Large Language Models, Gender Bias***

Education

2022 - Present **PhD Computer Science at Texas A&M University** (GPA: 4.0/4.0)
(2022-2026) Dr. Dionel Avilés '53 and Dr. James Johnson '67 Fellowship in Computer Science and Engineering
(Spring 2024) Department Travel Grant
(Spring 2024) 2024 CRA-WP Grad Cohort for Women

2017 - 2022 **B.S. Computer Science at Texas A&M University** (GPA: 3.9/4.0)
Summa Cum Laude
(2017-2021) President's Endowed Scholarship
(2018) Bertha & Samuel Martin Scholarship

Publications

Teleki, M., Dong, X., Kim, S., Caverlee, J., (2024). "Comparing ASR Systems in the Context of Speech Disfluencies". In: *INTERSPEECH*. URL: https://www.isca-archive.org/interspeech_2024/teleki24_interspeech.pdf.

Teleki, M., Dong, X., Caverlee, J., (2024). "Quantifying the Impact of Disfluency on Spoken Content Summarization". In: *Proceedings of the 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation*. URL: https://aclanthology.org/2024.lrec-main.1175.pdf.

Chaudhury, R., **Teleki, M.**, Dong, X., Caverlee, J., (2024). "DACL: Disfluency Augmented Curriculum Learning for Fluent Text Generation". In: *Joint International Conference on Computational Linguistics, Language Resources and Evaluation*. URL: https://aclanthology.org/2024.lrec-main.385.pdf.

Dong, X., Zhu, Z., Wang, Z., **Teleki, M.**, Caverlee, J., (2023). "Co2PT: Mitigating Bias in Pre-trained Language Models through Counterfactual Contrastive Prompt Tuning". In: *Findings of EMNLP*. URL: https://doi.org/10.48550/arXiv.2310.12490.

Alfifi, M., Dong, X., Feldman, T., Lin, A., Madanagopal, K., Pethe, A., **Teleki, M.**, Wang, Z., Zhu, Z., Caverlee, J., (2022). "Howdy Y'all: An Alexa TaskBot". In: *Alexa Prize TaskBot Challenge Proceedings*. URL: https://www.amazon.science/alexa-prize/proceedings/howdy-yall-an-alexa-taskbot.

Work

Software Enginering Intern at RetailMeNot May 2021 - August 2021

Used Amazon SageMaker and spaCy to get BERT embeddings for concatenated coupon titles and descriptions. Analyzed the relationship between each dimension of the BERT embeddings and uCTR using Spearman's correlation coefficient, and used principal component analysis to find dimensions with stronger correlations. Created a plan to evaluate these dimensions as possible features for the Ranker algorithm–which does store page coupon ranking–using offline analysis and A/B testing. Taught Data Science Guilds about neural networks, word embeddings, and spaCy.

Volunteer at The Hi, How Are You Project May 2020 - Dec 2020

Developed the "Friendly Frog" Alexa Skill with the organization at the beginning of the COVID-19 pandemic to promote mental health by reading uplifting Daniel Johnston lyrics and the organization's "Happy Habits."

Software Engineering Intern at RetailMeNot May 2020 - August 2020

Developed the "RetailMeNot DealFinder" Alexa Skill to help users activate cash back offers. Presented on Alexa Skill Development at the Data Science Sandbox with both Valassis and RetailMeNot teams.

Applications Engineering Intern at Silicon Labs May 2019 - August 2019

Designed and implemented the Snooper library using pandas to (1) systemize IC bus traffic snooping (I2C, UART, SPI, etc.) across different snooping devices (Saleae, Beagle, etc.), and (2) translate the traffic to a human-readable form for debugging purposes. Responded to multiple tickets from customers using the library.

Teaching

CSCE 485 Graduate Mentor at Texas A&M University Aug 2023 - Dec 2023

Mentored undergraduate student, Soohwan Kim, to work on a *disfluency-related research project* for CSCE 485 Directed Studies class.

CSCE 121, 181 Peer Teacher at Texas A&M University Dec 2018 - Dec 2019

Helped students with programming homework and answered conceptual questions by hosting office hours and *assisting at lab sessions for CSCE 121 and 181.* Created notes with exercises and examples to work through as a group during CSCE 121 reviews.

Afterschool Instructor at The Y (YMCA) Sep 2016 - July 2017

Taught multiple weekly classes at local elementary schools for the YMCA Afterschool program, and *authored instruction manuals* (Lego Mindstorms Robotics and Crazy Science) for the program.

Camp Counselor & Robotics Instructor at The Y (YMCA) May 2016 - Aug 2016

Tenderfoot (K-1st) summer camp counselor in the mornings, and Lego Mindstorms *robotics instructor* in the afternoons: designed curriculum, created competition, helped kids engage in the Engineering Process, and worked with them on how to problem-solve in a group setting.

Service

Reviewer for ICWSM Jan 2024, May 2024, Sep 2024.

Reviewer for ACL ARR August 2024.

More

Certifications: (Spring 2023) G.R.A.D. Aggies Basic Professional Development Certificate.

Relevant Coursework: CSCE 670 Information Storage & Retrieval, CSCE 625 Artificial Intelligence, CSCE 489 Special Topics: Recommender Systems, CSCE 421 Machine Learning, CSCE 435/735 Parallel Computing, ECEN 314 Signals and Systems, MATH 411 Mathematical Probability, MATH 308 Differential Equations, MATH 311 Topics in Applied Math I (Linear Algebra), PHIL 482 Ethics and Engineering.

Skills: Python, HuggingFace, NumPy, PyTorch, TensorFlow, Pandas, ChatGPT API, Conda, JupyterLab, Matplotlib, Seaborn, Scikit-learn, spaCy, SciPy, C++, Bash, Vim.