

CHAI Seminar Series

DATE: Wednesday, February 23, 2022, 1:30-2:30 PM

SPEAKER: Yulia Tsvetkov, PhD,
Assistant Professor, University of Washington

TITLE: Towards Language Generation We Can Trust

REGISTRATION LINK:

https://rit.zoom.us/webinar/register/WN_0BTHWMK4Q7-PXzaIXNYWQA

ABSTRACT: Modern language generation models produce highly fluent but often unreliable outputs. This motivated a surge of metrics attempting to measure the factual consistency of generated texts, and also a surge of approaches to controlling various attributes of the text that models generate. However, existing metrics treat factuality as a binary concept and fail to provide deeper insights on the kinds of inconsistencies made by different systems. Similarly, the majority of approaches to controllable text generation are focused on coarse-grained categorical attributes (typically only one attribute). To address these concerns, we propose to focus on understanding finer-grained aspects of factuality and controlling for finer-grained aspects of the generated texts. In the first part of the talk, I will present a benchmark for evaluating the factual consistency of generated summaries against a nuanced typology of factual errors. In the second part of the talk, I will present an algorithm for controllable inference from pretrained models, which aims at rewriting model outputs with multiple sentence-level fine-grained constraints. Together, these approaches make strides towards more reliable applications of conditional language generation, such as summarization and machine translation.

BIO: Yulia Tsvetkov is an assistant professor at the Paul G. Allen School of Computer Science & Engineering at University of Washington. Her research group works on NLP for social good, multilingual NLP, and language generation. The projects are motivated by a unified goal: to extend the capabilities of human language technology beyond individual populations and across language boundaries, thereby enabling NLP for diverse and disadvantaged users, the users that need it most. Prior to joining UW, Yulia was an assistant professor at Carnegie Mellon University and a postdoc at Stanford. Yulia is a recipient of the Okawa research award, Amazon machine learning research award, Google faculty research award, and multiple NSF awards including CAREER.