

# Eye Tracking and NLP

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Website: <https://acl2025-eyetracking-and-nlp.github.io/>

Our tutorial introduces a growing research area that combines eye tracking during reading with NLP. The tutorial outlines how eye movements in reading can be leveraged for NLP, and, vice versa, how NLP methods can advance psycholinguistic modeling of eye movements in reading. We cover four main themes: (i) fundamentals of eye movements in reading, (ii) experimental methodologies and available data, (iii) integrating eye movement data in NLP models, and (iv) using LLMs for modeling eye movements in reading. The tutorial is tailored to NLP researchers and practitioners, and provides the essential background for conducting research on joint modeling of eye movements and text.

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My research interests span applied machine learning, NLP, and eyetracking. My current focus is on generative models for eye-tracking data.

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My research interests are at the intersection of NLP, psycholinguistics and cognitive science, with a focus on analyzing and decoding cognitive state in language comprehension from eye movements.

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My research interests lie at the intersection of experimental and computational psycholinguistics, machine learning and NLP. The focus of my current research is the development of methods for leveraging eyetracking data for a broad range of language-related use cases, such as gaze-augmented language modeling, the inference of an individual's reading comprehension or foreign language skills, or the development of generative models to simulate human eye movements in reading. I am currently leading the EU COST Action [MultipleYE](#), an international network of researchers focusing on collecting and using multilingual eyetracking-while-reading data for computational psycholinguistics and NLP.

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My research lies on the intersection of Cognitive Science and Natural Language Processing (NLP). I study how humans acquire and process language by combining linguistic and cognitive theory, computational modeling, and behavioral and neuroimaging studies. I also examine how natural language processing in machines can be brought closer to human linguistic abilities by using insights and data from human language processing.