

Automatic Processing of Eye Tracking Movies

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Not much is known of how children use and process referring expressions outside the lab. Therefore, we would like to use the eye tracking glasses for recording of child speech and child directed speech, while interacting with a picture book. Collecting a corpus like this is crucially dependent on automatic annotation, because it will take too much time and money to transcribe the data by hand. Therefore we will develop a software tool for automatic annotation of data collected with eye tracking glasses. The tool will use a pre-trained deep learning network for automatic detection and recognition of objects in the participant's visual field. It will also use a deep learning network for automatic speech to text conversion. Finally, the linguistic information is linked to the visual scene and the gaze data. Automatic processing of the data will enable us to build a corpus that combines child (directed) speech with video and gaze data. The resulting software tool will be made available for other researchers, because it is not only applicable for data collected with eye tracking glasses, but also for video data.

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