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## **Leveraging AI to Quantify Comprehensibility and Intelligibility in Speaking**

*Saturday, 18 May 2024 10:10 (30 minutes)*

This presentation explores the use of AI in evaluating speaking and pronunciation. It addresses the challenges in assessing them quickly and accurately, specifically its impact on the metrics of comprehensibility and intelligibility. Pronunciation, in particular, significantly influences comprehensibility and intelligibility, essential components for effective communication. Historically, evaluating these components has been labor-intensive, relying heavily on human raters for comprehensibility and transcription for intelligibility assessment. Such processes are not only time-consuming but also impractical for educators with substantial workloads, thus remaining largely within the realm of academic research. In response to these challenges, this presentation introduces an innovative approach utilizing AI tools to quantify comprehensibility and intelligibility efficiently and accurately. The advent of AI technologies in language learning provides an unprecedented opportunity to streamline these assessments, making them more accessible to educators. Drawing on the authors work on evaluating speaking performance, the methodologies used include elicited imitation approaches, AI generated rubrics, AI-assisted transcription, and the use of other AI assisted tools. These tools facilitate the calculation of intelligibility scores by quantifying the percentage of words correctly pronounced as per a given standard. Additionally, comprehensibility is evaluated through AI-powered analyses of listener effort, aligning with established scales. A step-by-step workflow will be provided, equipping participants with the necessary guidance to apply these AI-based speaking assessment techniques in their own classrooms. This approach represents a significant departure from traditional, subjective evaluations of speaking performance. By leveraging AI technologies, educators can obtain objective, quantifiable metrics of speaking and pronunciation proficiency quickly without having to rely on inaccurate holistic scoring. This presentation, building on the insights gained from previous workshops and studies, aims to inspire educators and researchers to embrace technological advancements in the pursuit of more effective language teaching methodologies for evaluating speaking performance.

### **Keywords**

speaking evaluation, pronunciation, comprehensibility, intelligibility

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