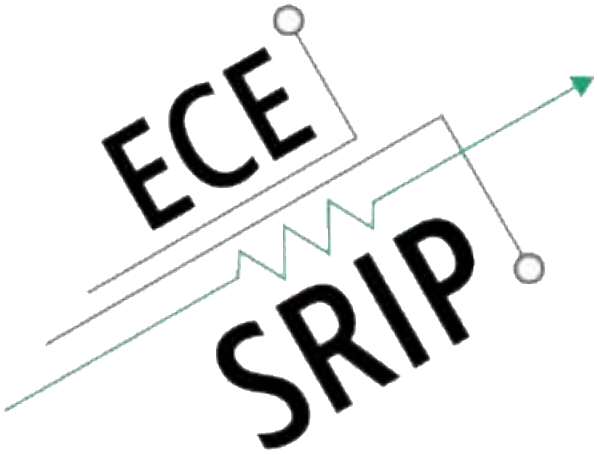


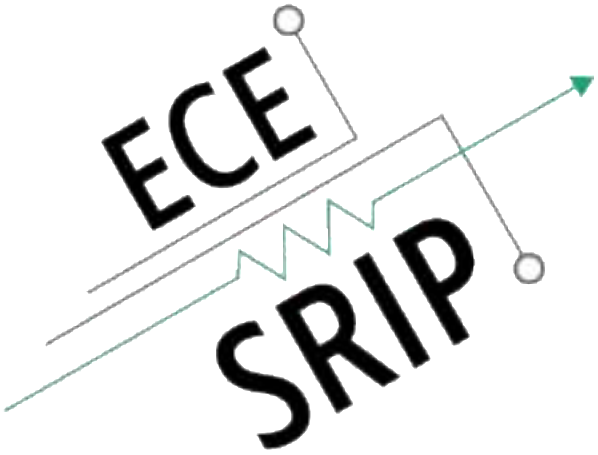
FACULTY MENTOR
Cosman, Pamela

PROJECT TITLE
Speech processing to detect overlap and rate

PROJECT DESCRIPTION
As part of a larger project that aims to provide augmented reality training to young adults with autism, the goal of this project is to measure certain features from a conversation between two people. We'd like to know the rate of speech (is someone talking too fast or too slowly), whether the volume is appropriate, and whether there are interruptions (speech overlap), among other features.

INTERNS NEEDED
1 B.S. and 1 M.S. Student

PREREQUISITES
No requirements, although some background in signal processing would be preferred.



FACULTY MENTOR
Cosman, Pamela

PROJECT TITLE
Machine learning & eye-tracking for autism assessment

PROJECT DESCRIPTION
Eye-tracking glasses can be used to assess gaze behavior in individuals with autism spectrum disorder. One goal of this project is to use machine learning approaches and signal processing to detect faces, objects, and various audio triggers (e.g., door knocks, phone ringing) to measure the latency between audio triggers and the onset of a look to a face or object. A second goal is to study latency during joint attention scenarios in which two people wear eye-tracking glasses, and one person is supposed to follow the gaze of the other.

INTERNS NEEDED
3 students (2 M.S. and 1 B.S.)

PREREQUISITES
Knowledge of machine learning and image processing would be very useful