PreSense - An Assistive Presentation Self-Quantification System

**Abstract:** Oral presentation is traditionally evaluated by a human instructor, which is cost-ineffective and time-consuming. PreSense allows individuals to self-evaluate their presentation skills. The system is designed to receive multimodal inputs from multiple sources, including webcam, Kinect sensor and Google Glass. The multimodal data is processed by a deep assessment framework, which outputs the evaluation results based on a carefully designed assessment rubric.

**NUSMAP Dataset:** 51 presentations from university students, annotated by crowd workers for training and testing.

**System Overview**

**Input Device**
- Kinect Sensor
- Google Glass

**Input Signals**
- Video (frontal view)
- Skeleton Information
- Audio
- Video (FPV)
- Head Movement

**Assessment Framework**

**Visualization**
- Text summary
- Statistical summary
- Feedback for any instance in time
- Suggestions for improvements

**Assessment Feedback Visualization**

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