

AI Assisted Emotional Reasoning for Video

Philip Stafford
Mia Guzman
Logan McDavid
Claudia Nething
Bryant Koester

Communication is often the most difficult aspect of any undertaking. Conveying intention is predicated upon a mutual understanding, and often this sort of understanding is only earned through spending years studying the way that others communicate. But even if one has taken the time to become familiar with some industry or domain, it is still necessary to understand the specific people that work alongside us. Each individual expresses themselves differently.

This project seeks to find a solution to this issue and fast track communication. Whether visually impaired, hearing impaired, or neuro-divergent, or just new to the scene, everyone can benefit from better communication. This project will pull together AI tools that clean audio, generate subtitles, and read facial expressions to better facilitate communication.

Using a prerecorded video of a speaker as input, we will apply the following AI tools:

- Krisp - audio cleaning and voice isolation
- Facial recognition software - determine facial expressions
- Subtitling software - generate subtitles.

With these tools, we will generate subtitles that have emotional context included. We will also create simple facial expressions based on the video subject's face to aid with emotional understanding for those with sight impairments, or those with autism.

We will likely find better tools as we research this topic further, and we will base our technology on what will best facilitate the use of these AI tools.