**SRN7**

*Describe an important potential application of Prof. Freeman’s audio-visual speech separation technique that wasn't mentioned in lecture. Also, describe methods for creating and/or gathering training data for this application.*

Another potential application of Prof. Freeman’s audio-visual speech separation technique might be leveraging this technique in order to encrypt messages into a noisy signal.

Leveraging this technique, we might be able to securely communicate a signal from a person to another. This enhances security because we mught integrate some facial recognition tool that would identify the person speaking. Adding to this facial recognition device, a person could communicate some information that would be noised with several other human audio in order for a human ear to not be able to clearly distinguish what the person is saying. However, having some kind of a unique denoising method thanks to a audio-visual speech separation technique, another user might be able to reconstruct the original signal and be able to get the important encrypted informatio.

Creating and gathering such training data could be done in the same way that Prof. Freeman introduced. Some person could produce several speech recordings and then we can mix them up in several ways and compare them to the true signal which would be the label of this training point, allowing us to artificually create several training signals from a few recordings.