**DEEP LEARNING ALGORITHM FOR VOICE RECOGNITION**

Here we talk about automatic speech recognition, it is still a biggest challenge because variety of speaking accents or pronunciations. Deep learning is becoming a mainstream technology for speech recognition and has successfully replaced Gaussian mixtures (GMM: earlier algorithm) for speech recognition and feature coding at an increasingly larger scale.

**FOCUS:**

* Applying deep learning algorithms to speech recognition and compare the speech recognition performance with conventional GMM-HMM based speech recognition method.

**MODEL:**

1. Feature Extraction
2. Decoder :
   1. Audio Model
   2. Pronunciation dictionary
   3. Language model
3. Recognized Words (output)

With the combination of Hidden Markov Model, Deep Belief Network (sort of neural network) and Restricted Boltzmann machine they achieve automatic speech recognition

Conclusion, this algorithm’s word error rate is about 24% as compare to GMM-HMM algorithm’s word error rate was 35%.