

Research Activities @ LEAP Lab, IISc

Sriram Ganapathy, November 2024



LEAP Lab Activity Summary

Representation Learning
For Speech

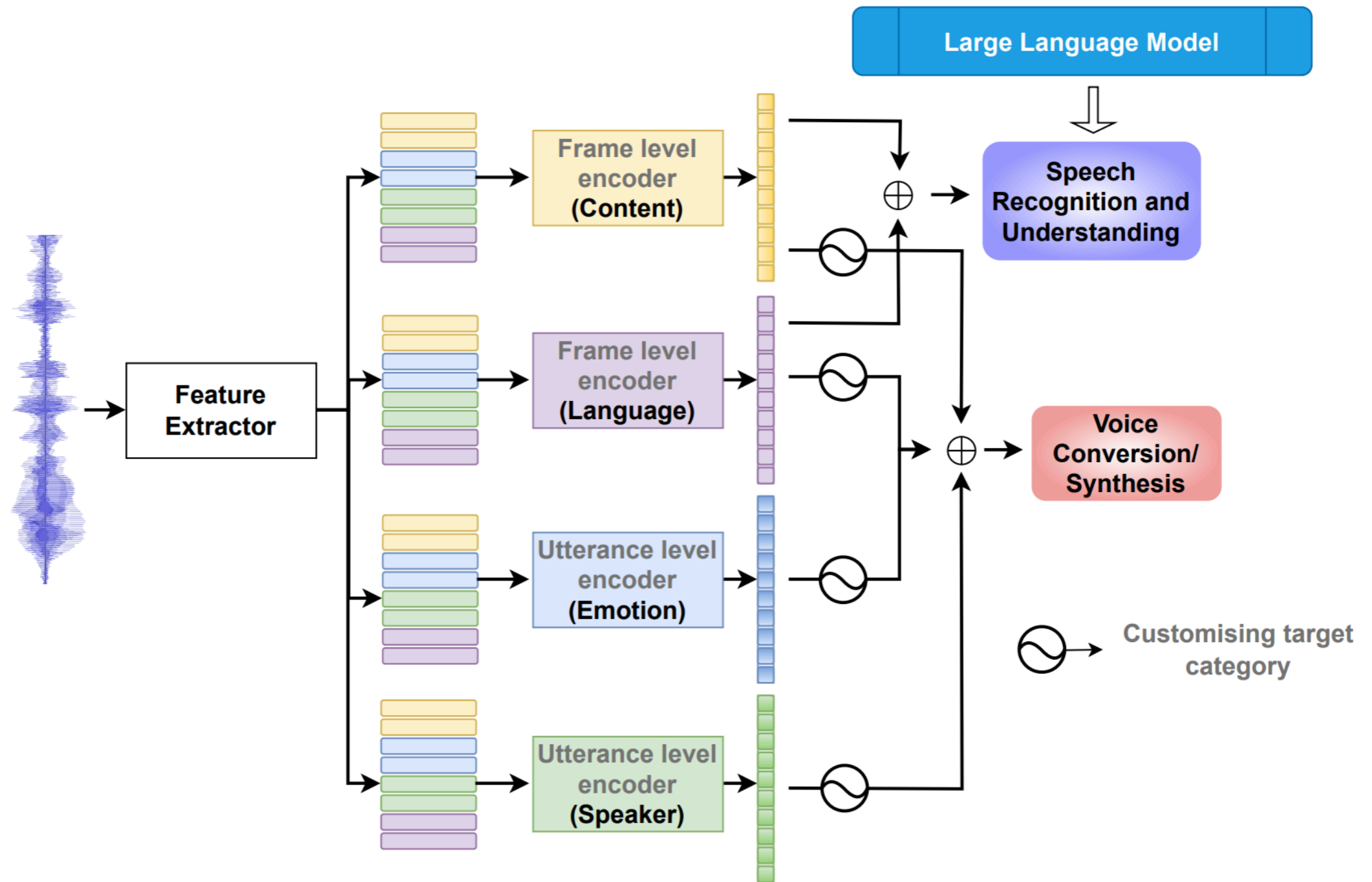
Explainable
And Health AI



Multimodal
Large Language Modeling

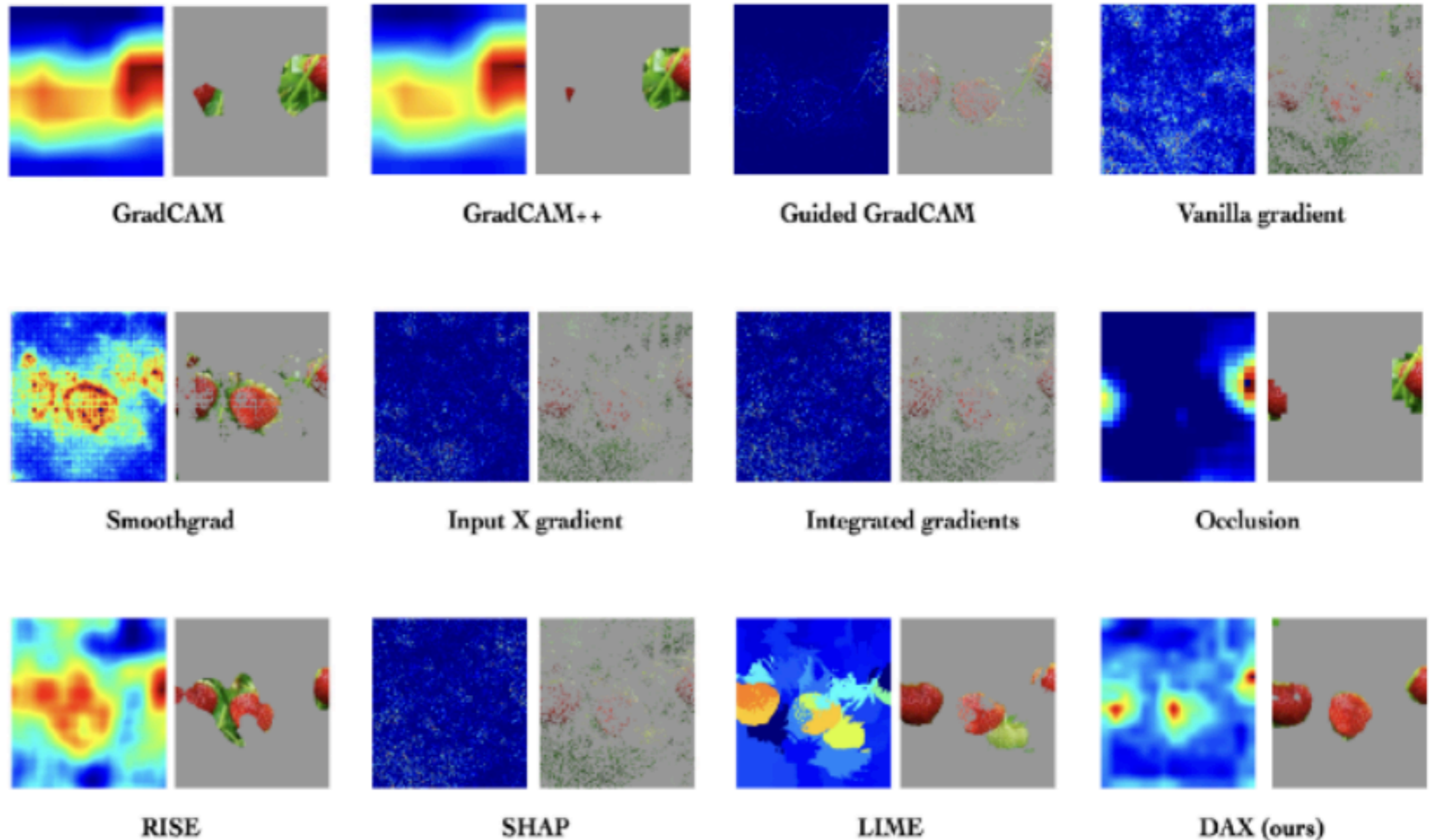
Neural basis of speech
perception

Representation Learning of Speech



- * Finding the speech representations for Content, Speaker and Emotions.
- * Disentangling the factors for generation and recognition tasks.

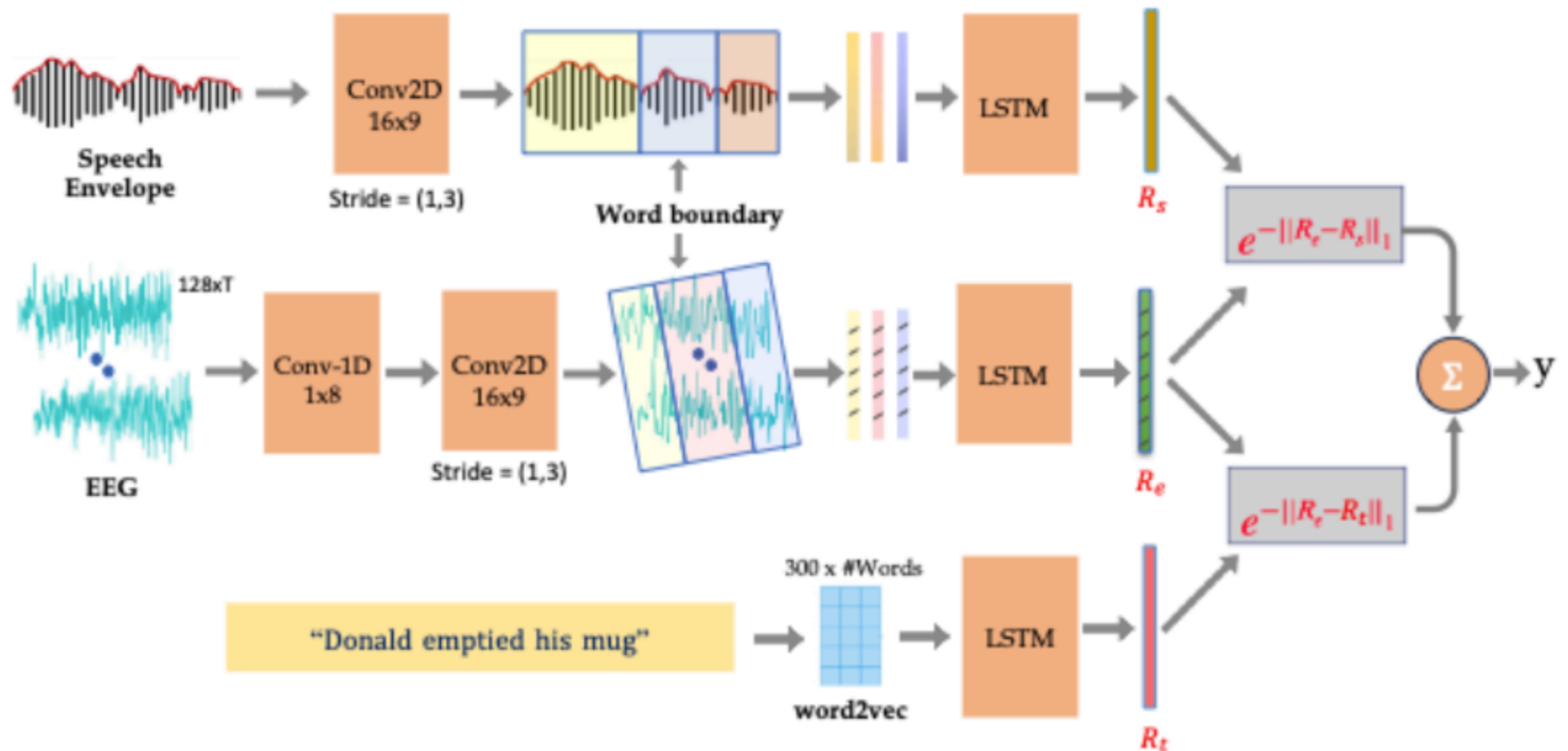
Explainable AI



*Using Distillation for Explainability (DAX)

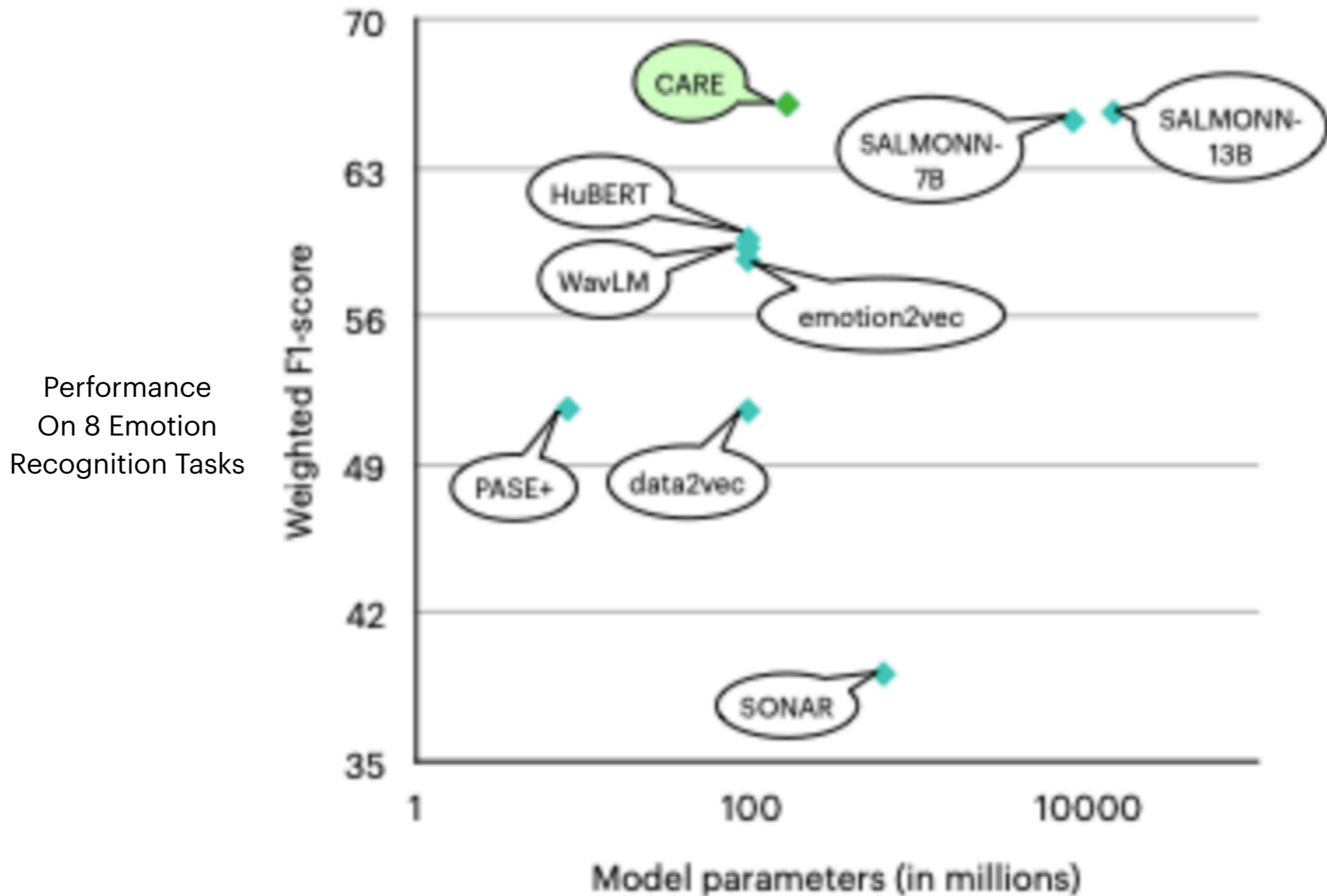
*Training a mask in the local neighborhood

Neural Basis of Speech Perception



*Understanding the semantic and acoustic encoding of speech perception

Multimodal Emotional Intelligence



*CARE - content and acoustic representations
of emotions