

from signals to human behavior modeling ...

**BSP: Striving for a holistic and objective view of humans in a domain-sensitive manner**



## Human-centered Behavioral Signal Processing (BSP)

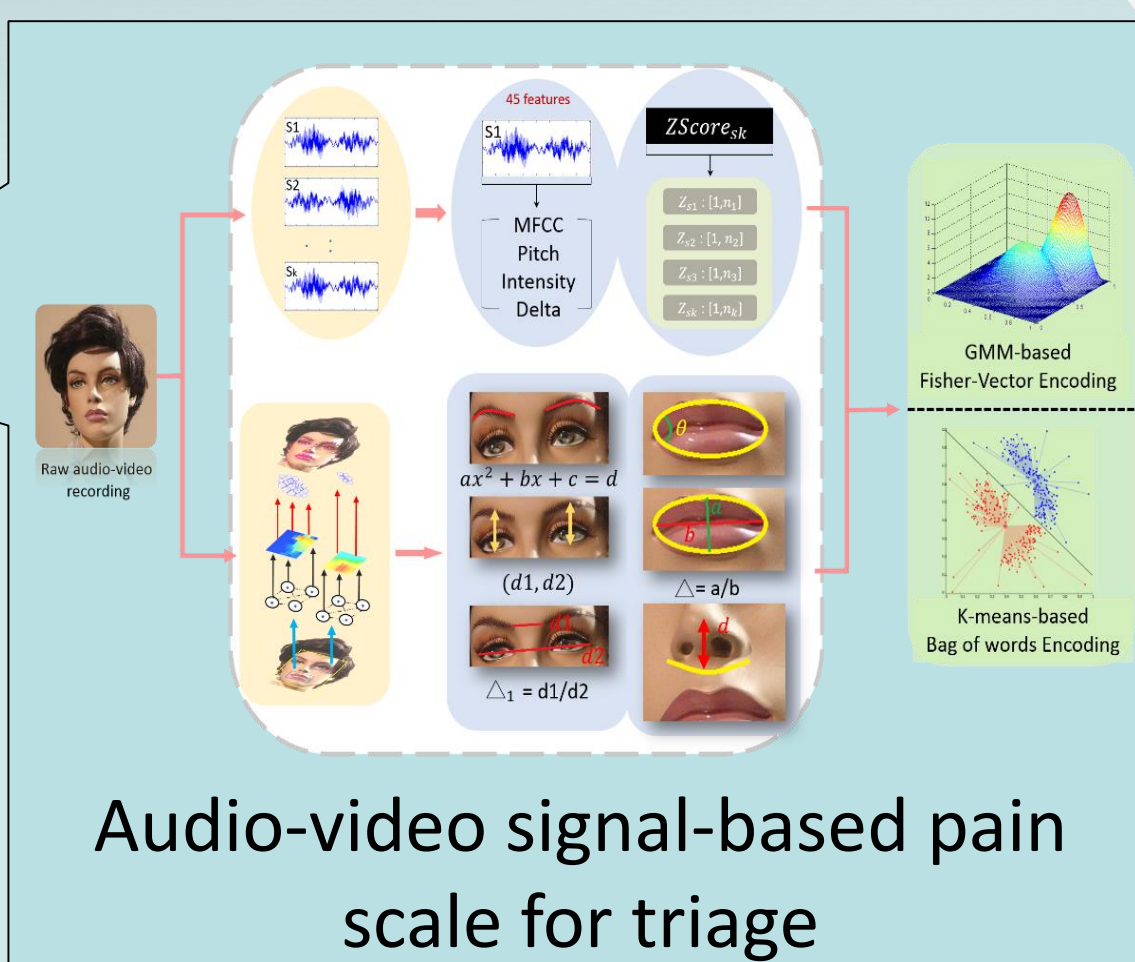
從客觀訊號到人類行為認知 ...

透過跨領域整合以電資工程演算法進行對於人類行為全面性客觀分析及預測

### 急診檢傷痛 覺分析

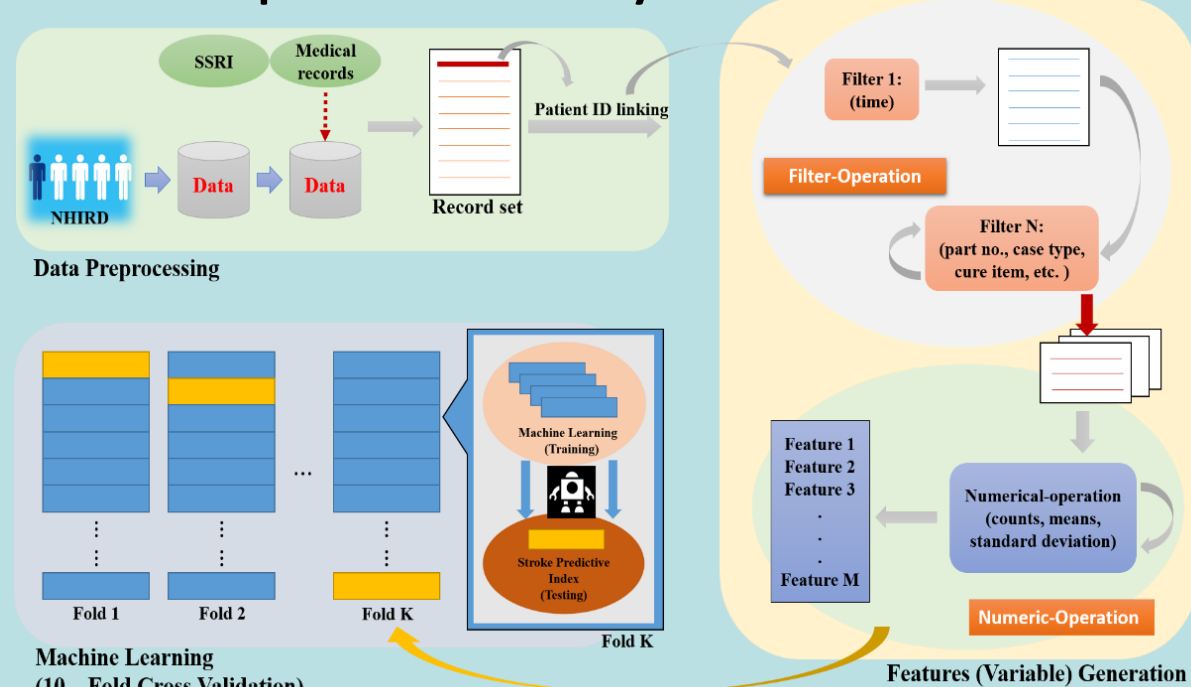


Pain scale at triage



Audio-video signal-based pain scale for triage

### Hadoop-based large-scale predictive system

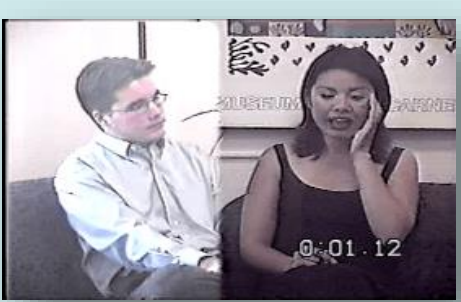


### 中風預測系 統建置



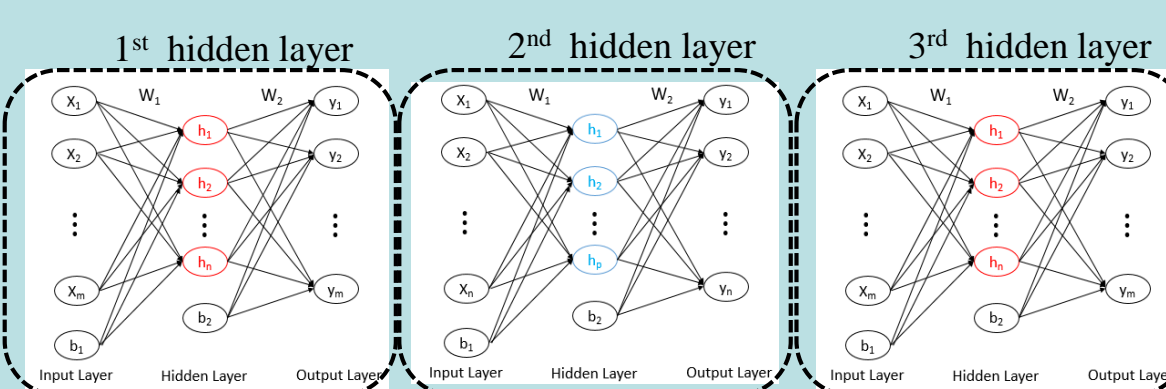
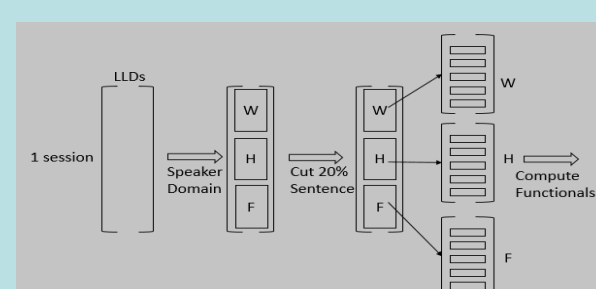
Stroke Predictive System

### 婚姻治療行 為分析

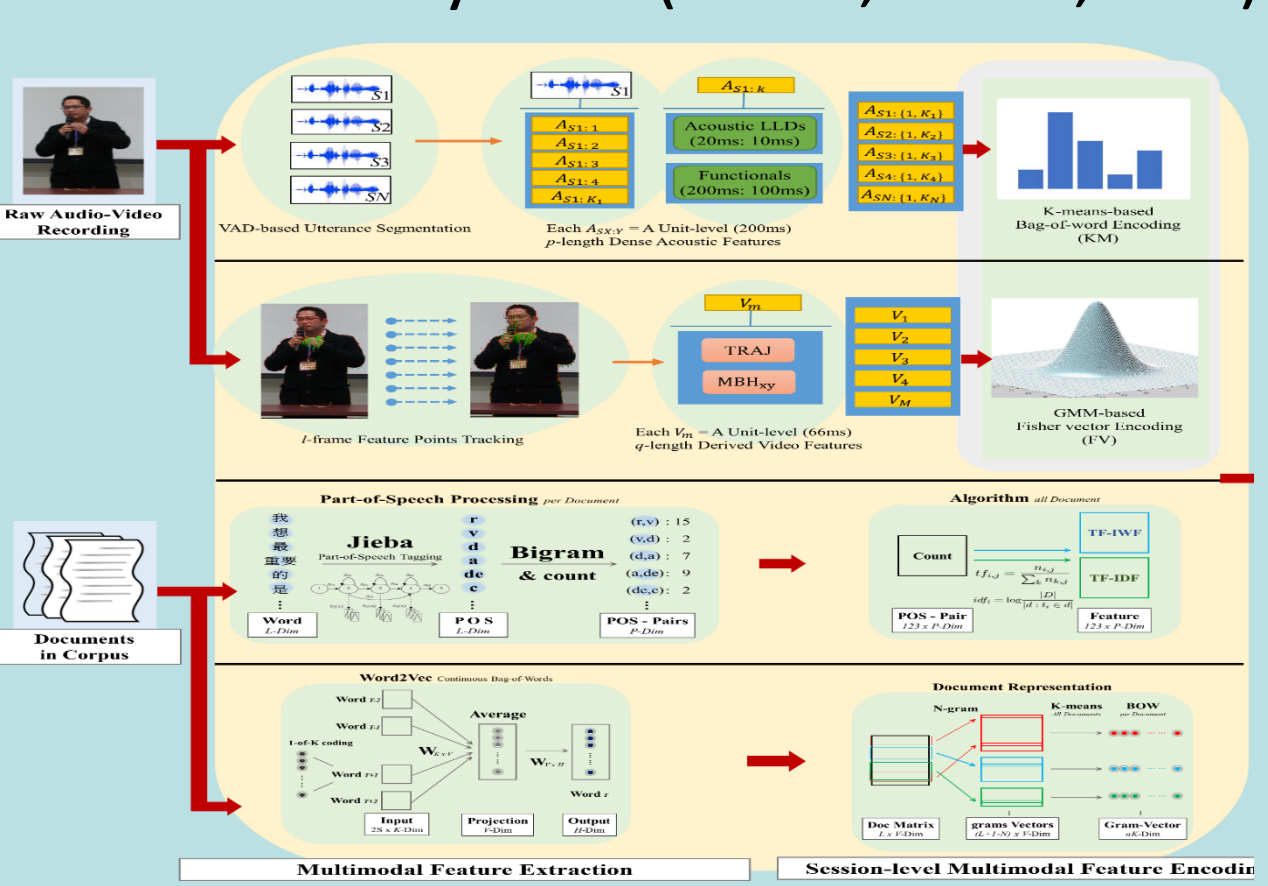


Couple Therapy

### Deep-learning behavior recognition



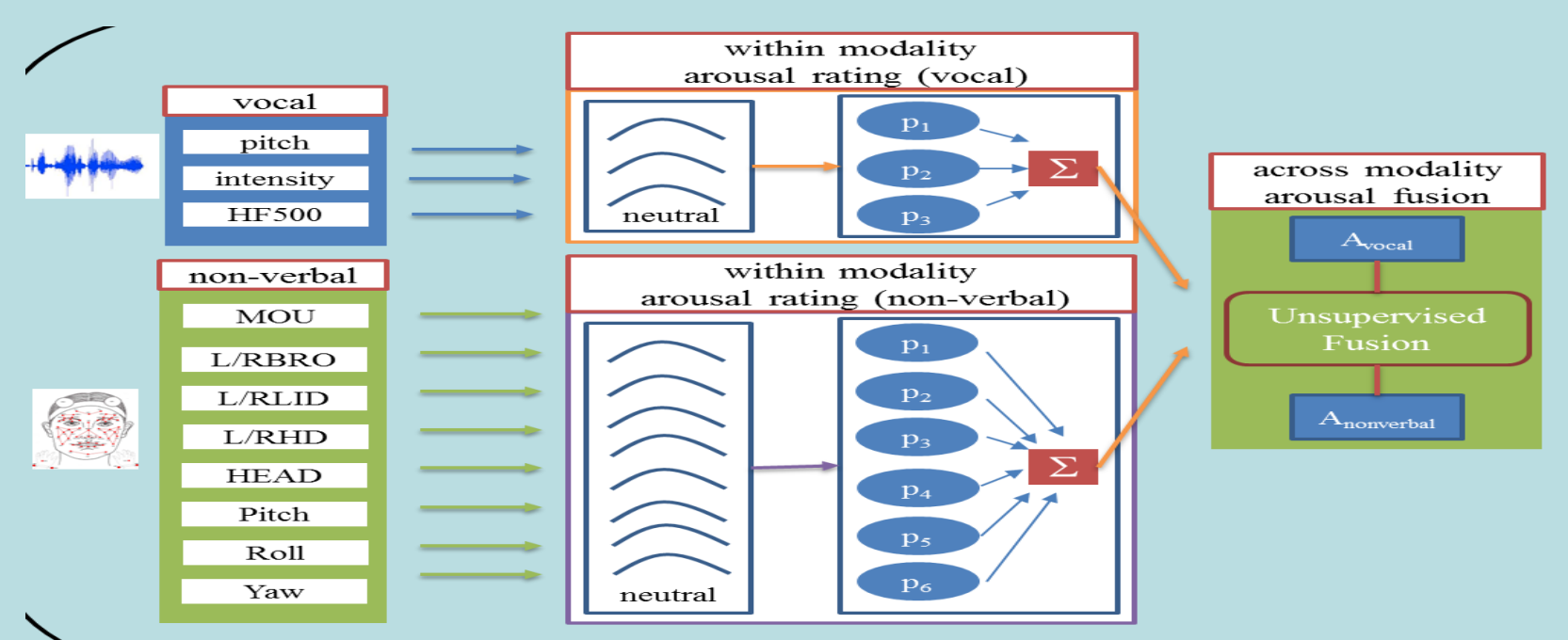
### Multimodal oral presentation assessment system (audio, video, text)



### 教育演講評 分系統建置



Oral Presentation Assessment



a) Multimodal arousal rating framework

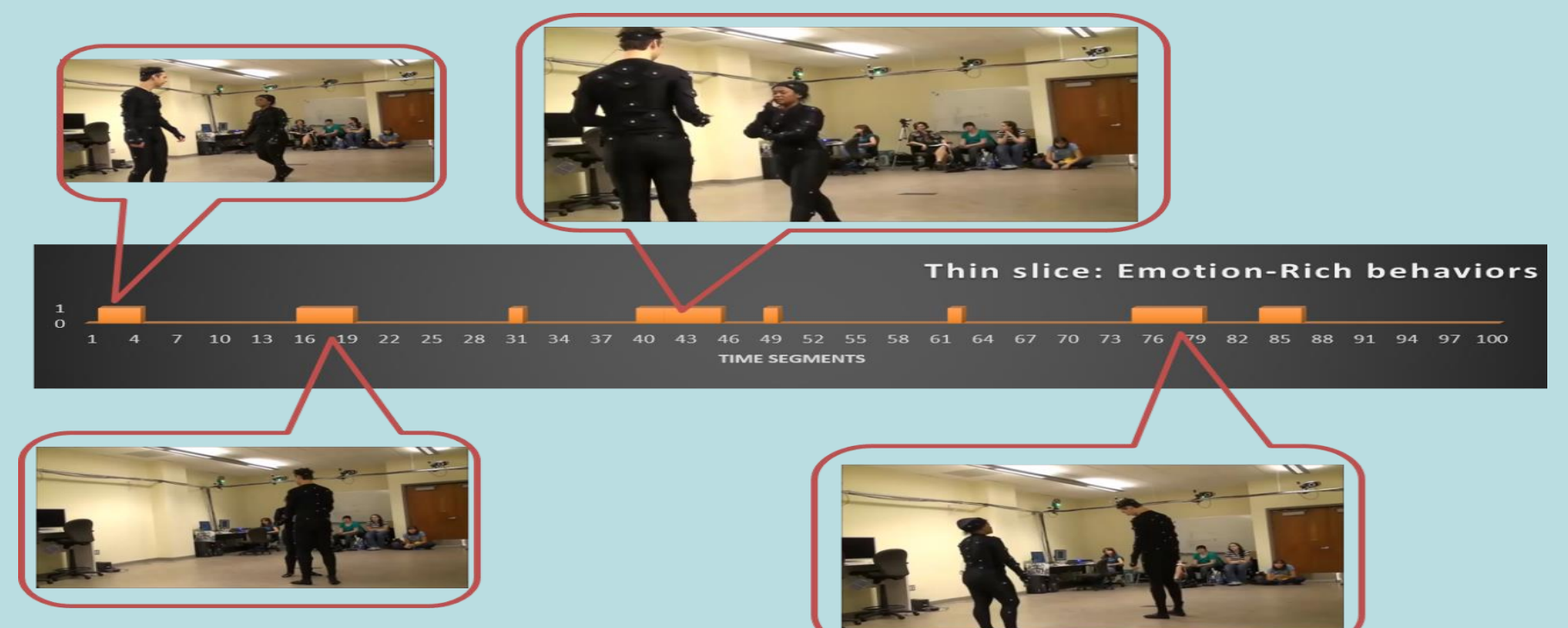
Unsupervised multimodal emotion recognition

### 多模態情緒辨識系統

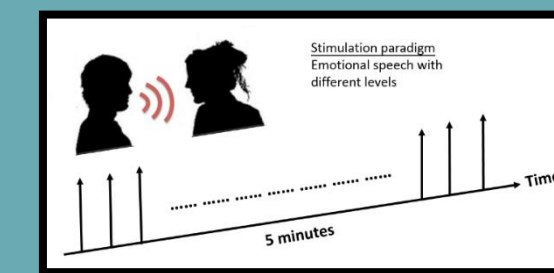


Multimodal emotion recognition

### Thin-slice (saliency-based) multimodal emotion recognition

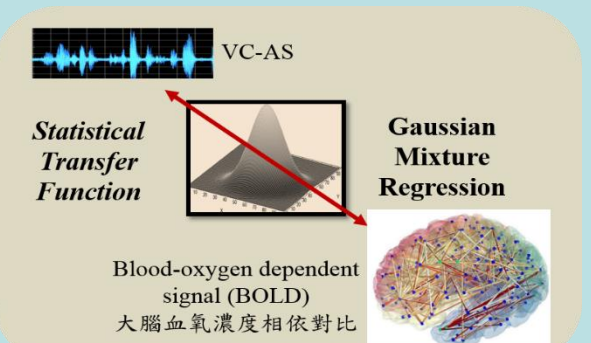


### 聲音情緒轉化腦神經活化分析



Joint dynamics between vocal emotion and fMRI BOLD response

### Statistical transfer function



李祈均老師  
BIIC LAB: 資電館713  
<http://biic.ee.nthu.edu.tw>

novel scientific insight with transformative algorithms disseminating into diagnosis, intervention, and decision-making for experts in applications of high societal impact