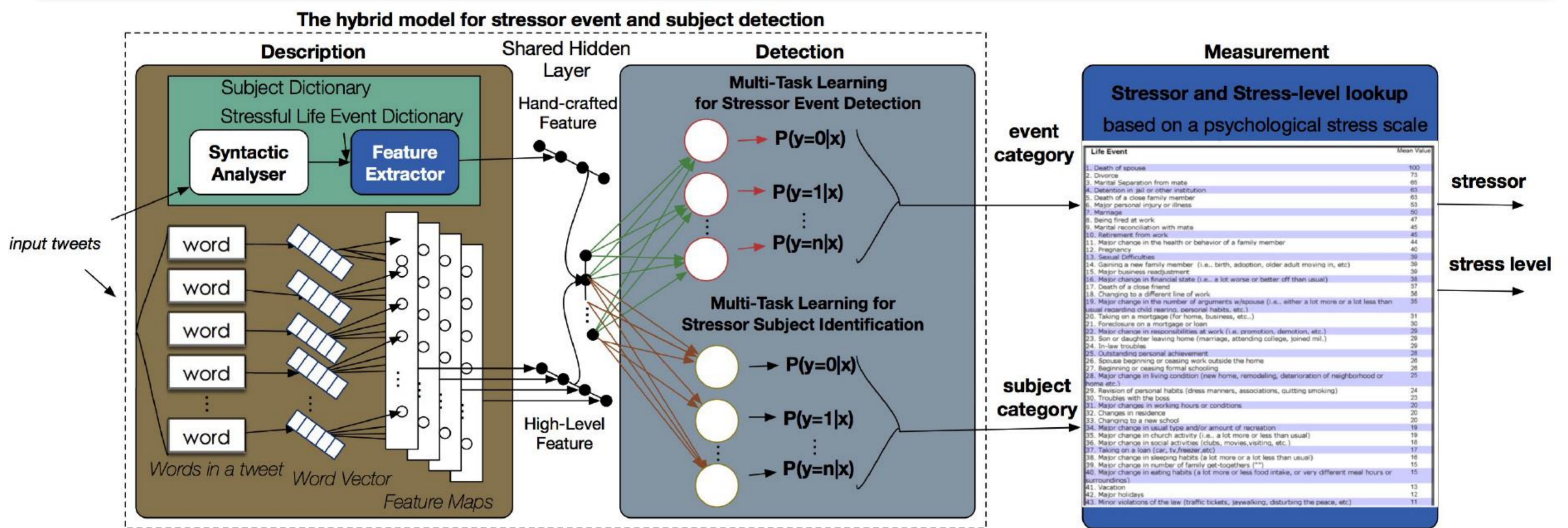


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❖ Challenges: Measuring Psychological Stress via Social Media

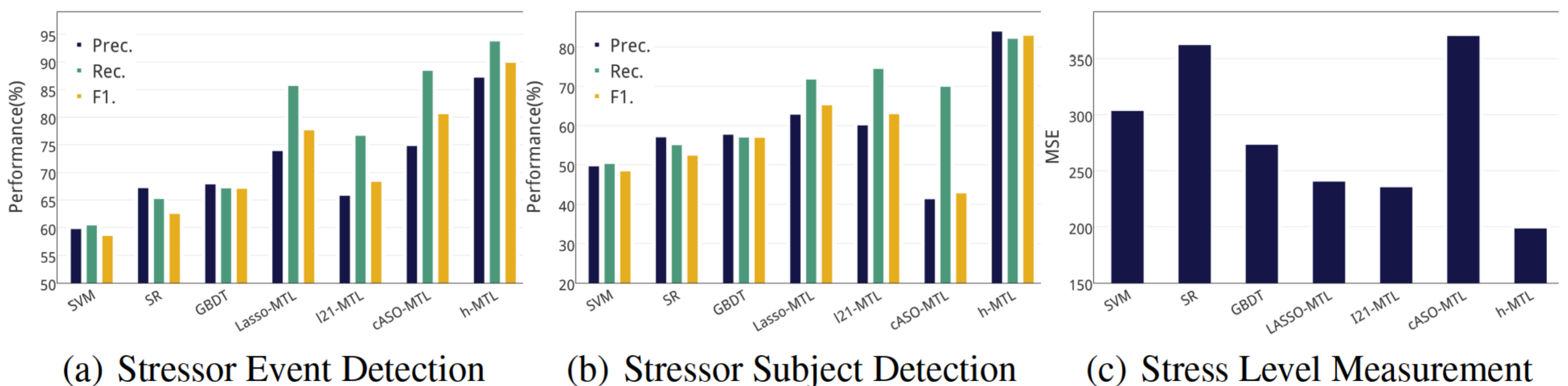
- Stress is composed of two key factors: stressor and stress level.
- Stressor, comprising of stressor event and stressor subject, triggers stress
- Measuring stress via social media is complicated:
 - Stressor subject detection
 - Stressor events happening to other subjects can also be someone's stress trigger.
 - Social media postings are usually informal and ambiguous
 - Stressor event detection
 - Stressor events are correlated
 - For some specific event categories, such as death, there are insufficient training samples

❖ Solutions: A Hybrid Model Combining CNN and Multi-Task Learning



- Description component that extracts features from input tweets;
- Detection component that integrates handcrafted and CNN features with Multi-Task Learning (MTL) for stressor event and subject detection
- Measurement component leveraging a psychological stress scale to estimate the stressor and the corresponding stress level.

❖ Evaluation



Publications:

- Huijie Lin, Jia Jia, etc., Moodee: An Intelligent Mobile Companion For Sensing Your Stress From Your Social Media Postings. (AAAI2016)
 Huijie Lin, Jia Jia, etc., User-Level Psychological Stress Detection from Social Media Using Deep Neural Network. (ACMM2014)
 Huijie Lin, Jia Jia, etc., Psychological Stress Detection From Cross-Media Microblog Data Using Deep Sparse Neural Network. (ICME2014)