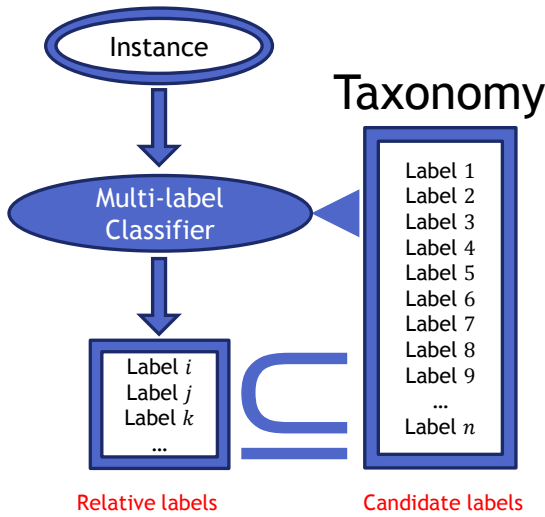
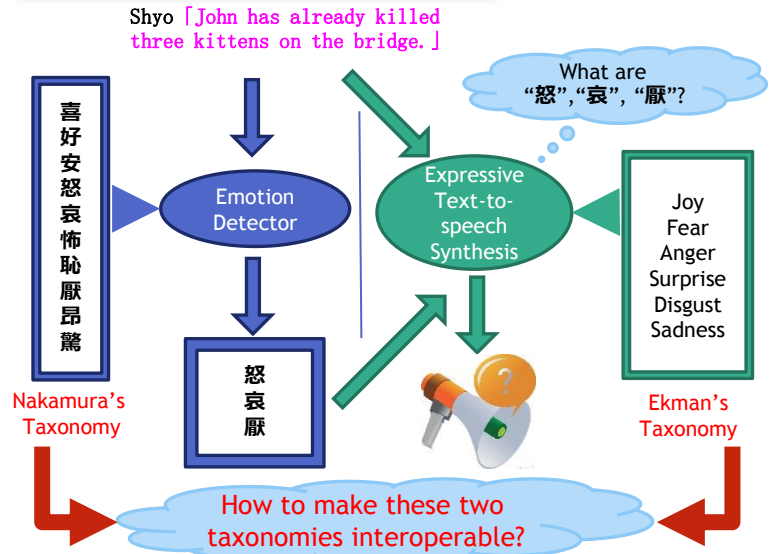


Crowdsourced Semantic Matching of Multi-Label Annotations

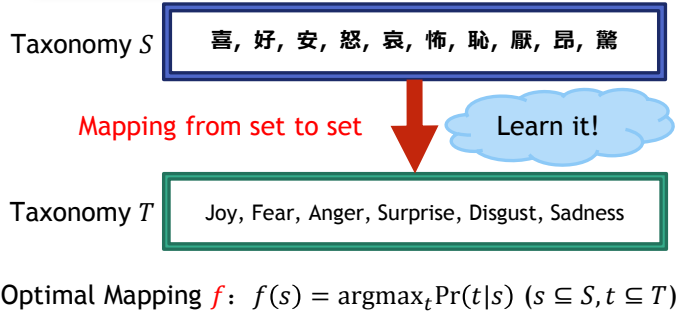
Multi-label Learning



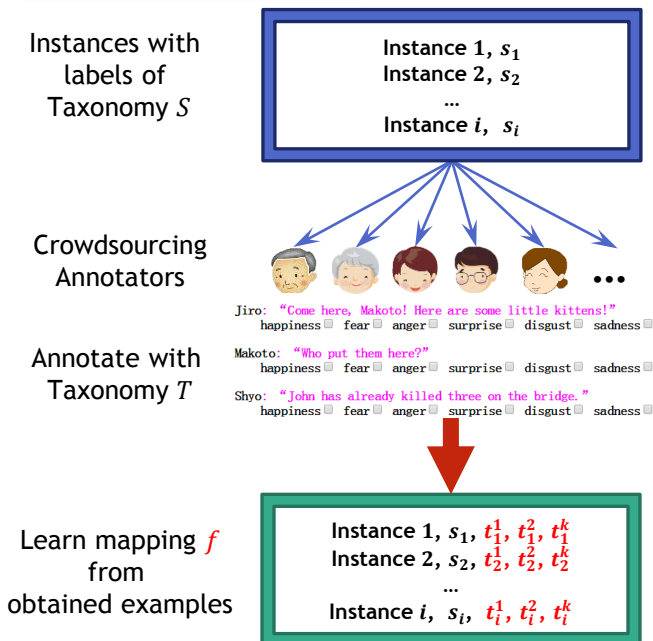
Example: Emotion Detection



Problem Definition

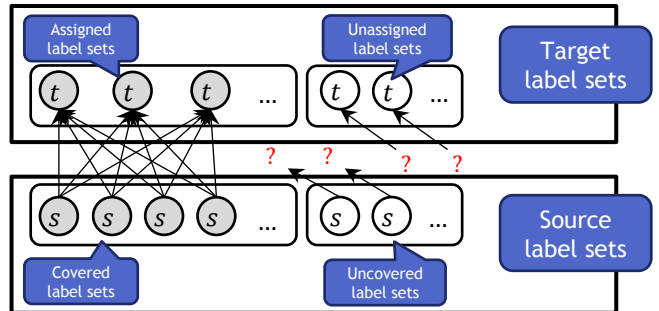


Proposed Approach

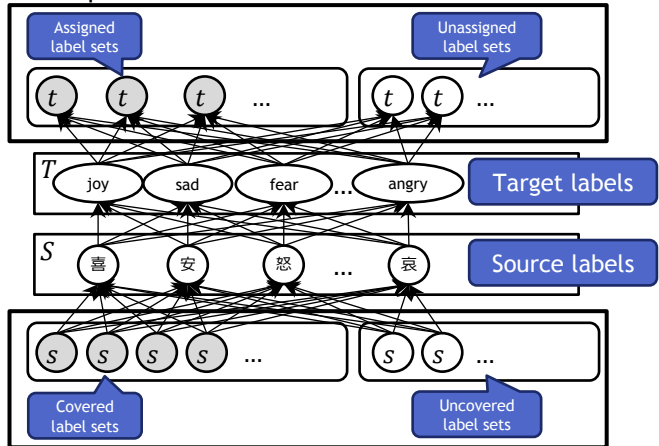


Statistical Methods

1. Conventional method



2. Proposed cascaded method



| Training story | Method | Ekman→Nakamura | Nakamura→Ekman |
|-----------------------------|-----------------|----------------|----------------|
| Although we are in love | Conventional | 0.854 | 0.867 |
| | Cascaded | 0.860 | 0.868 |
| | Cascaded + Bias | 0.906 | 0.907 |
| Little Masa and a red apple | Conventional | 0.872 | 0.883 |
| | Cascaded | 0.882 | 0.896 |
| | Cascaded + Bias | 0.903 | 0.912 |