

SVMs for Multi-Class Classification

School of Information Studies
Syracuse University

Extend Binary Classification to Multi-Class

Given **n** classes, for example:

• Sentiment = {positive, negative, neutral, no opinion}

One-vs.-one (pairwise) strategy:

- Create **n(n-1)/2** classifiers: pos|neg, pos|neu, pos|np, neg|neu,
 - neg|np, neu|np
- Conflicting results?

One-vs.-all strategy:

- Create **n** classifiers: positive or not, negative or not, neutral or not, np or not
- Pick the class with largest prediction value