



- The most probable (Max a Posteriori (MAP)) labelling is defined as:

$$\mathbf{x}^* = \arg \max_{\mathbf{x} \in \mathbf{L}} \Pr(\mathbf{x} | \mathbf{D}) = \arg \min_{\mathbf{x} \in \mathbf{L}} E(\mathbf{x})$$

- The only distinction (MRF vs. CRF) is that in the CRF the conditional dependencies between variables depend also on the data
- Typically we define an energy first and then pretend there is an underlying probabilistic distribution there, but there isn't really (Psssst, don't tell anyone)