* Conditional Random Fields (CRF)
  + Problem in which you attempt to assign label (unit vectors) to nodes of a graph as part of some objective.
* MAP-inference
  + CRF that attempting to find an assignment of unit vectors that minimizes
  + Where the functions and take a label or a pair of labels and return a real value.
  + When given the additional constraint that no label may be taken twice, this is the same as graph matching.
    - When the vertices and number of labels are equal, then it is a 1-to-1 matching.
* Local Polytope Relaxation for MAP-inference
  + See [35] & [54]
* Integer Relaxed Pairwise Separable Linear Programs (IRPS-LP)[50]
  + See [50]
* Factor Graphs (V,F,E)
  + Usually there is a function f(v1,v2,..,vN) = f1(…) \* f2(…) \* f3(… ) \*… \* fM(…)
  + V is a set of vertices
  + F is a set of functions
  + E is a subset of undirected edges between each (V,F) pair
    - There is an edge between f\_i and v\_j if function f\_i uses variable v\_j