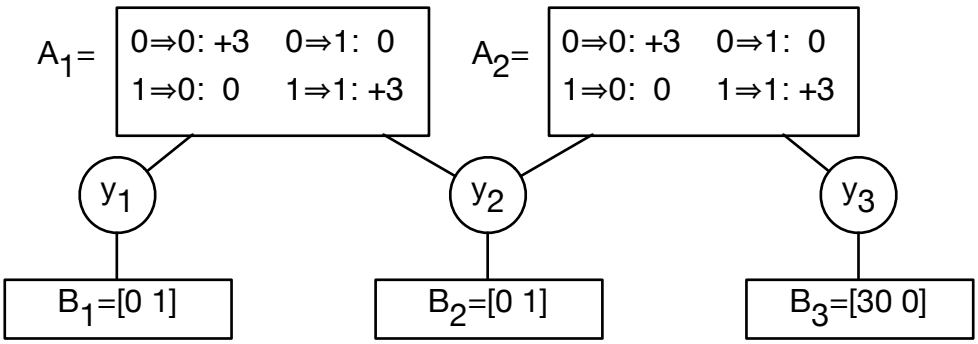
CS585 in-class Oct 1, 2015 Name: _____



Sticky-favoring CRF over vocab {0,1}. Factor scores are in log-scale additive form
G(y1, y2, y3) = A(y1,y2) + A(y2,y3) + B1(y1) + B2(y2) + B3(y3)

Most probable sequence: G( ) =

Second-most probable sequence: G( ) =

What solution will the greedy algorithm find?

Viterbi in additive form....

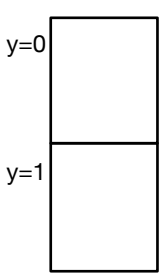
For t=1..T,
For k in {0,1},

$$V_t[k] := \max_j (V_{t-1}[j] + A_{t-1}(j,k) + B_t(k))$$
$$Back_t[k] := \arg\max_j (\ldots)$$

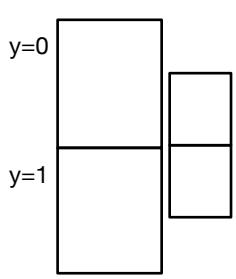
For t=1, assume A_0(anything)=0 and V_0[anything]=0

Final backtrace step: take best-scoring from last VT, follow the backpointers all the way back

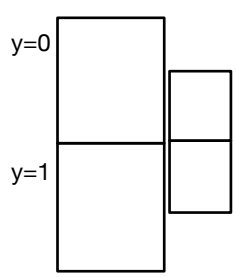
Run Viterbi and fill out the trellis with arcs like in the textbook's HMM example.



V_1



V_2 $Back_2$



V_3 $Back_3$

Solution y* = (, ,)