

Algorithm: MAP model construction

Initialisation:

$$S_0 = 0, \mathcal{M}_{L+1} = 0.$$

Recurrence: for $j = 1, \dots, L + 1$:

$$S_j = \max_{0 \leq i < j} S_i + \mathcal{T}_{ij} + \mathcal{M}_j + \mathcal{I}_{i+1, j-1} + \lambda;$$

$$\sigma_j = \operatorname{argmax}_{0 \leq i < j} S_i + \mathcal{T}_{ij} + \mathcal{M}_j + \mathcal{I}_{i+1, j-1} + \lambda.$$

Traceback: From $j = \sigma_{L+1}$, while $j > 0$:

Mark column j as a match column;

$$j = \sigma_j.$$