

How does it work? Fill out the D matrix

D matrix

	V	L	I	L	P	
V	20		14		3	0
L	11		17	10	4	0
L		9	10	15	5	0
P	2		4	5	10	0
	0	0	0	0	0	0

d matrix

	V	L	I	L	P
V	5	1	4	1	-3
L	1	5	2	5	-4
L	1	5	2	5	-4
P	-3	-4	-3	-4	10

Gap-open $W_1 = -5$
Gap-extension $U = -1$

$$D_{m,n} = \text{Max} \begin{cases} D_{m+1,n+1} + d(m,n), \text{match} \\ \text{Max}_{1 \leq k \leq N-m} [D_{m+k,n} + w_k] \\ \text{Max}_{1 \leq k \leq N-n} [D_{m,n+k} + w_k] \\ 0 \text{ (for local alignment)} \end{cases}$$

- Check all positions in (green) row and column to check score for gap extension.
- CPU intensive (O^3)