

1 Filling Out The Chart By Hand

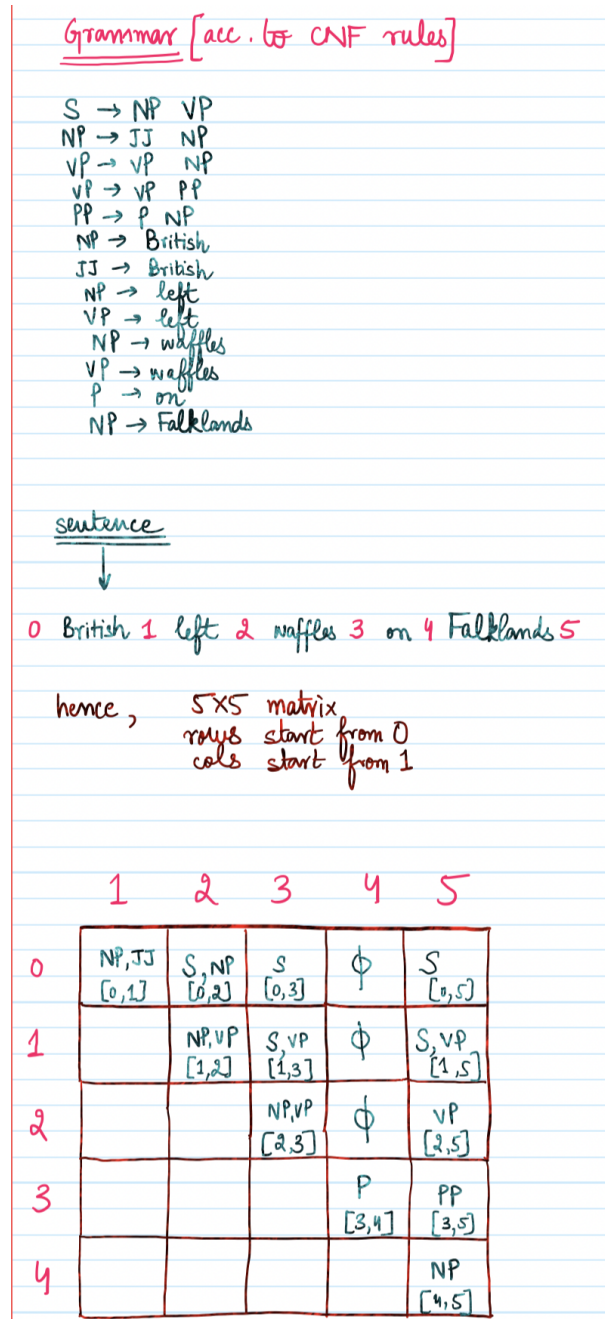


Figure 1: CYK Algorithm Chart filled by hand

2 Programming: CKY Algorithm

CKY Table:

	British	left	waffles	on	Falklands
0	{'NP', 'JJ'}	{'S', 'NP'}	{'S'}	set()	{'S'}
1		{'NP', 'VP'}	{'S', 'VP'}	set()	{'S', 'VP'}
2			{'NP', 'VP'}	set()	{'VP'}
3				{'P'}	{'PP'}
4					{'NP'}

Figure 2: CYK Algorithm Table

3 Programming: Weighted CKY Algorithm

Weighted CKY Table:

	astronomers	saw	stars	with	ears
0	{('NP', 0.4)}	set()	{('S', 0.05040000000000001)}	set()	{('S', 0.003628800000000015), ('S', 0.002721600000000015)}
1		{('V', 1.0), ('NP', 0.04000000000000001)}	{('VP', 0.12600000000000003)}	set()	{('VP', 0.006804000000000004), ('VP', 0.009072000000000004)}
2			{('NP', 0.18000000000000002)}	set()	{('NP', 0.012960000000000006)}
3				{('P', 1.0)}	{('PP', 0.18000000000000002)}
4					{('NP', 0.18000000000000002)}

Figure 3: Weighted CYK Algorithm Table

4 Programming: Sum Over All Parse Trees

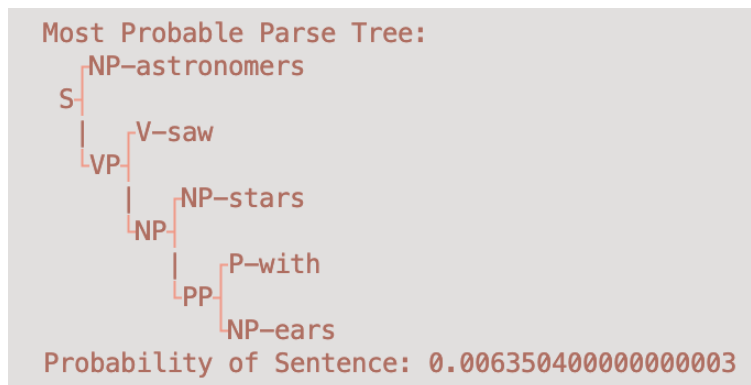


Figure 4: Most Probable Parse Tree