Solution to Assignment 2, Problem 1 (c)

Akash Rana

Placeholder -Placeholder are nodes whose value is feed in at execution time. It is used to feed actual training example

Feed dictionaries - These are the values in batches that are input to while training

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Solution to Assignment 2, Problem 2 (a)

Akash Rana

stack	buffer	new dependency	transition
...	...	...	...
[ROOT, parsed]	[this, sentence, correctly]	parsed → I	`LEFT-ARC`
[ROOT, parsed, this]	[sentence, correctly]		`SHIFT`
[ROOT, parsed, this, sentence]	[correctly]		`SHIFT`
[ROOT, parsed, sentence]	[correctly]	sentence → this	`LEFT-ARC`
[ROOT, parsed]	[correctly]	parsed → sentence	`RIGHT-ARC`
[ROOT, parsed, correctly]	[]		`SHIFT`
[ROOT, parsed]	[]	parsed → correctly	`RIGHT-ARC`
[ROOT]	[]	ROOT → parsed	`RIGHT-ARC`

Solution to Assignment 2, Problem 2 (b)

Akash Rana

A sentence containing n words will be parsed in 2n ways. It will take 1 step to shift the word and 1 step to do transition and there are n words. Hence, 2n ways.

Solution to Assignment 2, Problem 2 (g)

Akash Rana

1. Momentum is like a heavy ball rolling down the hill. The ball follows the steepest path with inertia which acts as a smoother and an accelerator, dampening oscillations and causing the ball to travell through small humps and local minima.
2. SOmething

Solution to Assignment 3, Problem 3 (a)

Akash Rana

Since $y(t)$ is one-hot,

$$PP^{(t)}(y^{(t)}, \hat{y}^{(t)}) = \frac{1}{\hat{y}_j^{(t)}} \tag{1}$$

$$= 2^J \tag{2}$$