Bootstrap, Bagging, Random Forest and Adaboost Questions

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April 3, 2019

Question 1

Which of the followings are random?

- statistic
- parameter
- point estimator
- sampling distribution
- standard error
- bias and variance of a point estimator
- bootstrap sample

Part-of-speech (POS) Tagging

- Given a sentence, give a part of speech tag for each word:

x	[START]	He	eats	apples
	x_0	x_1	x_2	x_3
y	[START]	Pronoun	Verb	Noun
	y_0	y_1	y_2	y_3

- $\mathcal{V} = \{\text{all English words}\} \cup \{[\text{START}], "."\}$
- $\mathcal{P} = \{\text{START}, \text{Pronoun}, \text{Verb}, \text{Noun}, \text{Adjective}\}$
- $\mathcal{X} = \mathcal{V}^n$, $n = 1, 2, 3, \ldots$ [Word sequences of any length]
- $\mathcal{Y} = \mathcal{P}^n$, $n = 1, 2, 3, \ldots$ [Part of speech sequence of any length]