

CS1571
Fall 2019
8/26 In-Class Worksheet

Name:

Where were you sitting in class today:

A. Your Goals

1. What are your goals in college?

My goal for college is to understand and gain knowledge on topics that I otherwise wouldn't be able to learn.

2. How are you hoping this course will help you to achieve your goals?

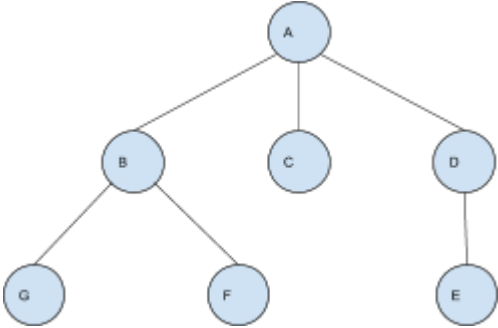
My goal for the future is to work in a company that focuses mainly on AI and continue doing research on sub topics of AI that will enhance the technology of the future so I believe learning the basics and back bone of AI in this class will help me out in the future.

B. Your Experience

3. What is your prior experience with Python?

I have taken python as an intro level course but still at a beginner level.

4. Given your current knowledge, rate your confidence you can solve the following problems correctly on a scale of 1-5, where 1 is not confident, and 5 is highly confident.

Problem	Confidence
<p>a) What is the time complexity for the following snippet of code? Why is the answer not $O(n^2)$?</p> <pre> Function print_x(int n): while (n >= 1): for (i=1; i<=n; i++): Print ("x"); n = n/2; </pre>	5
<p>b) Suppose we have two random variables A and B. We know the prior probabilities of A and B, and we know the conditional probability of B given A. Show how to obtain the conditional probability of A given B.</p>	5
<p>c) What is a good English translation for the following first order logic statement?</p> $\forall x \exists y \text{ Person}(x) \wedge \text{Cake}(y) \Rightarrow \text{Ate}(x,y)$	3
<p>d) Here is a sample tree structure.</p>  <pre> graph TD A((A)) --- B((B)) A --- C((C)) A --- D((D)) B --- G((G)) B --- F((F)) D --- E((E)) </pre> <p>Write a function (pseudocode is fine) for printing out the tree as a nested "list," where a parent node is the first element of a list and its children are the following elements of that list. For example, the above sample tree would be printed as:</p> $(A (B G F) C (D E))$	4