Graded Quiz • 30 min

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	Which of the following defines the AI black box problem?	1/1 point
	The challenge of understanding the inner workings of opaque systems	
	A dangerous machine intelligence put in a digital prison	
	O Not being able to know how something crashed or failed	
	Machine intelligence making something illusory, like pulling a rabbit from a hat	
	<ul> <li>Correct         A black box is something one cannot know the workings of, or how an input creates an output.     </li> </ul>	
	Which of the following elements are important aspects of ethical integrity with regards to data? (Select two.)	1/1 point
	✓ Whether the data was gathered in an ethical manner.	
	Correct Data gathered in an unethical manner voids ethical integrity.	
	☐ What type of data (audio, visual, etc.) is being collected and/or utilized.	
	If the holders of data are trustworthy entities.	
	<ul> <li>Correct         Trust is a network of agreed behavior that can potentially be broken by a defection of its weakest link.     </li> </ul>	
	☐ If the data is commercially viable or monetarily valuable.	
١.	Which of the following best describes why data is sometimes compared to oil? (Select two.)	1/1 point
	Data can be easily monopolized.	

	Data can be monetarily valuable.	
	Correct The world's most valuable companies used to be oil companies. Now they are data-driven companies.	
	Data can damage the environment.	
	✓ Data can fuel algorithmic technologies.	
	<ul> <li>Correct</li> <li>Data is typically a very important component of algorithmic technologies, especially machine learning.</li> </ul>	
4.	At what point should ethical consideration ideally be applied to emerging technologies?	1 / 1 point
	From its inception, through maintenance, to applying foresight regarding its decommissioning.	
	O Upon delivery, with appropriate warranties where necessary.	
	O During periodic reviews, with ongoing customer feedback solicited.	
	Once an ethical issue has received negative feedback in public media.	
	Correct It's challenging to retroactively attempt to uphold ethical integrity of a system already in place. It's ideal to ensure that necessary elements are in place beforehand.	
5.	Which of the following describes dual-use or multipurpose data?	1/1 point
	O Data that can be transformed into multiple forms, e.g. extracting audio from a video file.	
	O Data that can be easily shared with a partner or family member for mutual enjoyment.	
	Data collected for one application that could also be applied to another application in a different domain.	
	O Data that can be used in multiple devices or formats, such as a video on a Smart TV, tablet, and computer.	
	Correct For example, grocery shopping data collected for marketing purposes could potentially also be used to create a profile of family health.	
6.	Which of the following are important ethical elements to safeguard within ethical AI systems? (Select two.)	1 / 1 point
	Accountability and management of bias.	

	<ul> <li>Correct         These are important elements to uphold within ethical AI systems     </li> </ul>	
	✓ Transparency and explainability, balanced with privacy.	
	<ul> <li>Correct         These are important elements to uphold within ethical AI systems.     </li> </ul>	
	<ul><li>☐ The number of layers, tensors, or parameters used in a model.</li><li>☐ Performance and optimization.</li></ul>	
7.	Which of the following is the generally agreed upon current state of the art of AI?  Perceptrons	1/1 point
	Superintelligence	
	Strong Al	
	Narrow Al	
	<ul> <li>Correct         While current technologies are inching towards something generalizable through techniques such as meta learning, they are very far from the flexibility of organic cognition.     </li> </ul>	
8.	Which of the following describe important aspects of why emerging technologies are so capable and powerful?	1/1 point
	(Select two.)	
	☐ They are exciting and captivating to many people.	
	☐ They can displace workers by performing their jobs more efficiently.	
	They can automate very complex operations.	
	Correct Emerging technologies enable us to automate tasks that would be challenging or even impossible for humans to perform.	
	They may be able to self-improve by learning from data.	
	<ul> <li>Correct         Machine learning means that technology can adapt and improve over time, even if hardware stays the same.     </li> </ul>	

9.	Management asks someone to do a data-related task. Which of the following would likely be ethically problematic? (Select two.)  Aggregate data together.  Manipulate data or alter its interpretation.  Correct Changing data for the purpose of changing what it can tell you does not help uphold ethical integrity.  Delete any erroneous data.	1/1 point
	Erroneous data is data that has some errors, flaws, or doesn't appear to belong; removing it from the data sample is unlikely to present an ethical issue.	
	☐ Change data to another format.	
10.	• Which of the following describe important aspects in the role of an ethical AI engineer? (Select two.)	1/1 point
	☐ Writing new equations to express intelligence.	
	☐ Building and maintaining computational hardware.	
	Cleaning and sorting data, and auditing for bias.	
	<ul> <li>Correct         These tasks are a routine yet ethically essential aspect of the role.     </li> <li>PAGE</li> </ul>	
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	Keeping up with the latest developments and vulnerabilities.	
	Correct An ethical AI engineer should stay aware of new techniques that can be used to help defend their systems, as well as new attacks that might be deployed against them.	