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WP3

***Algorithmic Bias* toolkit for synchronous sessions**

MCQ quizzes

10 single choice questions with 3 options per CU

INSTRUCTIONS FOR UPLOAD QUESTIONS TO A SOFTWARE THAT GENERATES ONLINE TESTS
1. Find a software to generate a single choice quiz. 2. In the form field to enter the question, copy/paste each question. 3. In the form field to enter each option, copy/paste each option. 4. Don't forget to define the solution (correct answer) for each question. 5. For each question add an instruction: a. Suggestion: "Read the question and select the correct answer". ● Check how the navigation between questions on your software is like, and you can add in the instruction something like "...and click on the SUBMIT button." or "... "...and click on the NEXT button". 6. Set the minimum success score for this test (we recommend 60% - the user must get at least 6 questions right out of 10). 7. If available in the software, define a limited time to complete the test (we recommend 12 minutes). Check what other specifications are available in your software. You may be able to define things like the number of attempts the user has to do the test, among other options.

Competence Unit 3 – Algorithms and their limitations

QUESTIONS

Question n°		Question & Options Text	Correct answer
1	Question	**What are the primary considerations when understanding algorithmic complexity?**	
	Option 1	The simplicity of the algorithm's code and ease of debugging.	
	Option 2	The resources like time and memory required by the algorithm, and how these scale with larger inputs.	X
	Option 3	The reputation of the developer who wrote the algorithm.	
2	Question	**What is one limitation of algorithmic decision-making that requires careful consideration?**	
	Option 1	Algorithms are too sophisticated for humans to understand.	
	Option 2	Algorithms are inherently unbiased and accurate when applied correctly.	
	Option 3	Algorithms can only operate within predefined frameworks and rely heavily on the quality of input data.	X
3	Question	**What is one of the key reasons for understanding algorithms in the digital age?**	
	Option 1	They help ensure that computers can run without human input.	
	Option 2	They have become essential to how modern computing functions and significantly impact our daily experiences.	X
	Option 3	They prevent computational systems from processing information.	
4	Question	**According to Knuth, what property ensures that algorithms avoid infinite loops and always terminate?**	
	Option 1	Finiteness.	X
	Option 2	Definiteness.	
	Option 3	Input.	
5	Question	**What is the primary role of abstraction in algorithm design?**	
	Option 1	To obscure complex details from developers.	
	Option 2	To help break down a problem into smaller, manageable parts and focus on essential aspects.	X
	Option 3	To implement decision points where algorithms can take multiple paths.	
6	Question	**What is a notable challenge in machine learning caused by biased or insufficient data?**	
	Option 1	Data Quality and Quantity.	X
	Option 2	Overfitting.	
	Option 3	Interpretability.	
7	Question	**Why is transparency important in algorithmic operations and decision-making processes?**	
	Option 1	It builds trust and allows experts and regulators to audit and assess algorithms effectively.	X
	Option 2	It ensures that the public is informed about new technological advancements.	
	Option 3	It prevents the development of innovative algorithmic solutions.	

8	Question	**What is a primary limitation of algorithmic decision-making that leads to discriminatory results?**	
	Option 1	Unforeseen consequences.	
	Option 2	Lack of transparency.	
	Option 3	Bias and discrimination.	X
9	Question	**Which approach is essential for ensuring the fairness, transparency, and accountability of algorithmic systems?**	
	Option 1	Excluding demographic analysis.	
	Option 2	Continuous monitoring and auditing.	X
	Option 3	Reducing training data.	
10	Question	**Why is lack of contextual understanding a significant limitation in algorithmic decision-making?**	
	Option 1	It makes algorithms overly dependent on societal norms.	
	Option 2	Algorithms may fail to adapt to evolving contexts.	X
	Option 3	It results in deterministic, predictable decision-making.	