Co-funded by
the European Union

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 4 – Data fairness and bias

QUESTIONS

Question n°		Question & Options Text	Correct answer
1	Question	**What type of AI bias results from discrepancies in how data is collected?**	
	Option 1	Coverage Bias.	X
	Option 2	Observer Bias.	
	Option 3	Survivorship Bias.	
2	Question	**Which fairness metric aims to equalize the rate of positive outcomes for different groups?**	
	Option 1	Demographic Parity.	X
	Option 2	Equal Opportunity.	
	Option 3	Calibration by Group.	
3	Question	**Which method is commonly used to detect biases in training data for AI systems?**	
	Option 1	Algorithm Optimization.	
	Option 2	Data Visualization.	
	Option 3	Data Auditing.	X
4	Question	**What does the 'fairness through unawareness' concept entail in AI fairness?**	
	Option 1	Ensuring all user data is anonymized before processing.	
	Option 2	Ignoring sensitive attributes during model training.	X
	Option 3	Applying the same model to all groups without customization.	
5	Question	**In machine learning, what does 'adversarial debiasing' refer to?**	
	Option 1	A method to improve model accuracy by introducing competitive models.	
	Option 2	A technique where models are trained to predict and counteract potential biases.	X
	Option 3	A strategy to defend against malicious attacks on AI systems.	
6	Question	**What is the impact of 'label bias' in supervised learning models?**	
	Option 1	It enhances the model's ability to generalize from the training data.	
	Option 2	It reduces the computational complexity of the model.	
	Option 3	It skews the model's predictions based on mislabelled training data.	X
7	Question	**Which approach is most effective in mitigating bias at the data level in AI systems?**	
	Option 1	Increasing the model's prediction speed.	
	Option 2	Enhancing the complexity of the model's architecture.	
	Option 3	Ensuring diversity and representativeness in the training dataset.	X
8	Question	**How does 'counterfactual fairness' help in AI decision-making?**	
	Option 1	By increasing the efficiency of AI systems in real-time environments.	
	Option 2	By guaranteeing that a decision is fair if it would be the same in a counterfactual world where a sensitive attribute is different.	X
	Option 3	By ensuring that the AI's decisions remain consistent over time.	
9	Question	**What does 'intersectionality' address in the context of AI fairness?**	
	Option 1	The combined impact of multiple sensitive attributes on decision-making.	X

	Option 2	The interaction between different AI models within a system.	
	Option 3	The crossing of ethical and legal boundaries in AI applications.	
10	Question	**What role does 'algorithmic transparency' play in promoting fairness in AI systems?**	
	Option 1	It ensures faster computation and processing within AI systems.	
	Option 2	It allows stakeholders to understand how AI decisions are made and to identify potential biases.	X
	Option 3	It focuses solely on improving the graphical user interface of AI applications.	