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Metadata Sheet — WP2 / Erasmus+ KA220-SCH, ref. 2025-1-IT02-KA220-SCH-000365213

OER 3.3.1

Dataset Biases and Social Justice: Identifying Historical and Gender Distortions

Identifier	OER 3.3.1
Title	Dataset Biases and Social Justice: Identifying Historical and Gender Distortions
Creator	Directorate of Secondary Education of Dodecanese - Greece
Description	The resource examines algorithmic justice, starting from the idea that an AI system is never neutral because it learns from data that carry the traces of existing inequalities. It maps the main bias types across the data lifecycle and uses the Gender Shades case to show why averages hide injustice and why disaggregation is a practice of justice. The practical focus is on turning value choices about fairness into criteria for classrooms and schools.
Keywords	dataset bias; algorithmic fairness; social justice; representation bias; measurement bias; disaggregation; Gender Shades; digital equity
Language	EN (English)
Affiliation	Directorate of Secondary Education of Dodecanese - Greece
Contributor	STIAEM Transnational Scientific Board (peer review, Rhodes validation protocol)
Media Format	Text; Infographics
Genre	Training Manual; Educational Guide
URL	https://www.stiaemproject.eu/?oer_download=OER-3.3.1
Citation	Directorate of Secondary Education of Dodecanese. (2026). *Dataset Biases and Social Justice: Identifying Historical and Gender Distortions* [Educational guide]. Slow Tech Innovation: AI, Ethics, and New Teaching Methods (STIAEM), 2025-1-IT02-KA220-SCH-000365213.
References	Buolamwini, J., & Gebru, T. (2018). Gender shades: Intersectional accuracy disparities in commercial gender classification. Proceedings of Machine Learning Research, 81, 1-15. https://proceedings.mlr.press/v81/buolamwini18a.html Cosgrove, J., & Cachia, R. (2025). DigComp 3.0: European digital competence framework (Fifth edition). Publications Office of the European Union. https://data.europa.eu/doi/10.2760/0001149 European Commission. (2020). Assessment list for trustworthy artificial intelligence (ALTAI) for self-assessment. https://digital-strategy.ec.europa.eu/en/library/assessment-list-trustworthy-artificial-intelligence-altai-self-assessment Mehrabi, N., Morstatter, F., Saxena, N., Lerman, K., & Galstyan, A. (2021). A survey on bias and fairness in machine learning. ACM Computing Surveys, 54(6), Article 115. https://doi.org/10.1145/3457607 Miao, F., & Cukurova, M. (2024). AI competency framework for teachers. UNESCO. https://doi.org/10.54675/ZJTE2084
Educational Level	Secondary School
Associated Module / MOOC Video Lesson	Module 3 - AI Ethics and Systemic Biases / Video 3.3 - Fairness, Biases and Cognitive Effort
Learning Objectives	Identify the main types of bias along the data lifecycle (historical,

	representation, measurement, algorithmic); explain, through the Gender Shades case, why the average hides injustice and why disaggregation is a practice of justice; recognise that algorithmic fairness entails value choices and translate them into criteria for the school.
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