

Female role models in Maths for Machine Learning and the Heroine’s Learning Journey

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When carrying out a research within the FostWom Project (Fostering Women to STEM MOOCs), an Erasmus+ Project, a list of good practices of inclusive communication in (not only) MOOC videos emerged [1]. Afterwards, STEM MOOC content was developed by university teachers and MOOC teams’ partners with a gender balance narrative and images, with references in which female engineers and mathematicians have been made visible.

The ”Machine Learning, Maths & Ethics” online course launched for the first time at the end of 2021 on the MOOC Técnico platform presents Machine Learning from a practical point of view, taking apart some apparent difficulties and favouring a gender balance language. The MOOC uses socially relevant databases and draws attention to the ethical problems of Artificial Intelligence. There, you can find a discussion on the possible harms of facial recognition and automatic language as a consequence of the preconceived codes embedded in the algorithms, which was raised by a group of researchers while working at MIT, Stanford and Google [2]. The second bilingual edition of the MOOC started in April 2022 and is offered in conjunction with the Heroine’s Learning Journey.

The ”Heroine’s Learning Journey” (HLJ) is an approach intended to support and motivate young women in their STEM apprenticeship through the use of female role models [3]. The journey is the result of an investigation led by the authors and based on well-known heroic journeys narratives extensively used in popular cultural, as books and movies, much inspired by the influential Campbell’s book [4] recently re-edited. Following the several steps of the HLJ journey, each young woman can identify herself with a historical or current strong female character who appears to help her addressing tech problems and individual challenges. Moreover, in each stage, the apprentice heroine is encouraged to find her place among tech groups. In this presentation, we will discuss the results and impact of several activities dedicated to Brazilian young women when running the ”Machine Learning, Maths & Ethics” together with the ”Heroine’s Learning Journey”.

References

- [1] P. Corti, V. Baudo, C. Turró, A. M. Santos, and C. Nilsson, ”Fostering women to stem moocs,” *EMOOCs 2021*, p. 129, 2021.
- [2] C. D’ignazio and L. F. Klein, *Data feminism*. MIT press, 2020.
- [3] S. Atkinson, ”Woman’s under-representation in stem: The part role-models have played in the past and do we still need them today?” in *36th International Pupils’ Attitudes Towards Technology Conference*, 2018, p. 9.
- [4] J. Campbell, *The hero with a thousand faces*. New World Library, 2008, vol. 17.