Measuring Algorithmic Bias in Job Recommender Systems: An Audit Study Approach

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Abstract

This paper investigates the gender bias in job recommender systems. By conducting a resume (algorithm) audit study in four Chinese job boards, I find that the gender-specific jobs, which are only displayed to one gender, account for 9.7% of the total recommended jobs to identical male and female applicants. Gender-specific jobs differ in both job requirements and the words used in the job descriptions: Compared to jobs that are only recommended to men, only-to-women jobs propose lower wages, request fewer years of working experience, are more likely to require literacy skills and administrative skills, and tend to contain the words related to feminineness personality reflecting the gender stereotypes in workplace. The contend-based recommendation algorithms and the hiring agents’ behaviors incorporated in job recommender systems are the possible drivers of the gender bias in job recommendations.

Keywords: Recommender System, Algorithm, Gender, Job Platform

JEL Codes: C93, J71, J16, O33, M50

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