Bias mitigation in automated loan eligibility process

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Abstract

This project addresses the automation of the student loan eligibility process using a dataset focused on loan approval. Given the risk of inherent bias in machine learning models, particularly towards certain demographic groups, ensuring fairness is paramount. We will experiment with various machine learning models to achieve a balance between accuracy and fairness. By mitigating biases, such as those related to gender, our aim is to promote equitable decision-making and minimize potential discriminatory outcomes.

1 Description

1.1 Goals

We will tackle the following tasks through our work:

1. Automation of the student loan eligibility process.

2. Identification of discriminatory biases towards specific categories of individuals.

3. Bias mitigation adjusting algorithms to ensure fairness and impartiality.

4. Analysis of the proposed approach and elucidation of its foundations based on societal preconceptions.

1.2 Deliverables

We will provide an exhaustive final report along with a GitHub repository containing our project's implementation to guarantee the reproducibility of our study.