

Mariia Nikitash

8.12 Exercises. Problem 6(Medium)

The inclusion of race/ethnicity as a predictor in predictive models for homeless services duration present complex ethical issues. Historical biases embedded within data, stemming from systemic injustices such as racism, raise big concerns about continue discrimination. Incorporating race and ethnicity as a predictor risks exacerbating disparities and violating principles of algorithmic fairness. Additionally, proxy variables like ZIP codes or neighborhoods may indirectly reflect racial or ethnic demographics, which is leading to similar discriminatory outcomes. The opacity of complex machine learning algorithms further complicates matters, hindering transparency and interpretability. Data scientists bear a responsibility to consider the ethical implications of their work and mitigate potential harm to vulnerable populations. Establishing auditing systems and conducting experiments to assess algorithmic fairness are crucial steps in ensuring equitable outcomes. Saying that, the pursuit of accurate predictions must be balanced with the imperative to uphold principles of justice and fairness.

As algorithms increasingly build decision-making processes, ethical considerations must be at the forefront of data science practices. By prioritizing fairness and accountability, data scientists can contribute to building more just and equitable societies.

8.13 Supplementary Exercises. Problem 1 (Medium)

Using the order of schools listed on the FAFSA form to determine grant aid allocation raises ethical concerns because of its potential to increase socioeconomic disparities. This practice might disadvantage students from low-income backgrounds, who prioritize less prestigious schools, perpetuating inequality. From my point of view, grant aid should be allocated based on financial need, not application behavior, to uphold fairness in resources distribution. Employing predictive models based on application choices reduce the principle of equitable access to education. It may also disproportionately affect marginalized groups who are less informed about the implications of their listing order. Institutions have a responsibility to prioritize transparent and fair processes in distributing financial aid. Decision-making should focus on supporting students with demonstrated need rather than penalizing strategic application behavior. Ethical considerations dictate that aid allocation should not be influenced by factors unrelated to financial circumstances.

In conclusion, by prioritizing fairness, institutions can reduce the potential for discrimination and promote equal opportunity in higher education. Ethical grant aid practices are essential for fostering a more just and inclusive educational system.