Part 3: Ethical Reflection (10%)

Ethical Analysis: Prejudice and Equity in Forecast Modelling

In the real business scenario where it can be decided to apply the predictive algorithm used in Task 3, it is necessary to take into account the intrinsic biases of the data. The original breast cancer dataset can be found in medical diagnostics, and it might not be diverse considering such factors as age, gender, ethnicity, or socioeconomic status. Repurposed as a tool to predict internal priorities within an organization (e.g., issue-triage or resource-assignments), they would reflect (unintentionally) any prejudices against underrepresented teams or departments. They could adversely impact them should the history of labeling have been subjective or colored by internal politics.

To curb this, frameworks such as IBM AI Fairness 360 (AIF360) can be brought into the pipeline. AIF360 offers fairness metrics and bias-reducing algorithms that help developers address the disparity in prediction results. As an example, in case some of the subsets of the team submissions constantly have a lower subordination factor, which will probably be done because of the bias of historical data, AIF360 will be able to identify such a trend and correct the model in such a way to treat all groups in the same constitutive way. This facilitates ethical AI usage and fosters trust in an automated approach to decision-making.