Ethical Reflection on Predictive Model Deployment

When deploying a predictive model like the one built on the Kaggle Breast Cancer Dataset, it is crucial to consider potential biases. For example, if the dataset underrepresents certain groups (such as specific teams, demographics, or rare conditions), the model may perform poorly for those groups, leading to unfair or inaccurate predictions. This can result in resource misallocation, overlooked high-priority cases, or perpetuation of existing inequalities.

Fairness tools like IBM AI Fairness 360 (AIF360) can help address these issues. AIF360 provides metrics to detect bias and algorithms to mitigate it, such as reweighting, adversarial debiasing, or preprocessing techniques. By applying these tools, organizations can evaluate model fairness across different groups, adjust the model or data as needed, and ensure more equitable outcomes. Regular audits and transparency are essential to maintain trust and fairness in AI-driven decision-making.