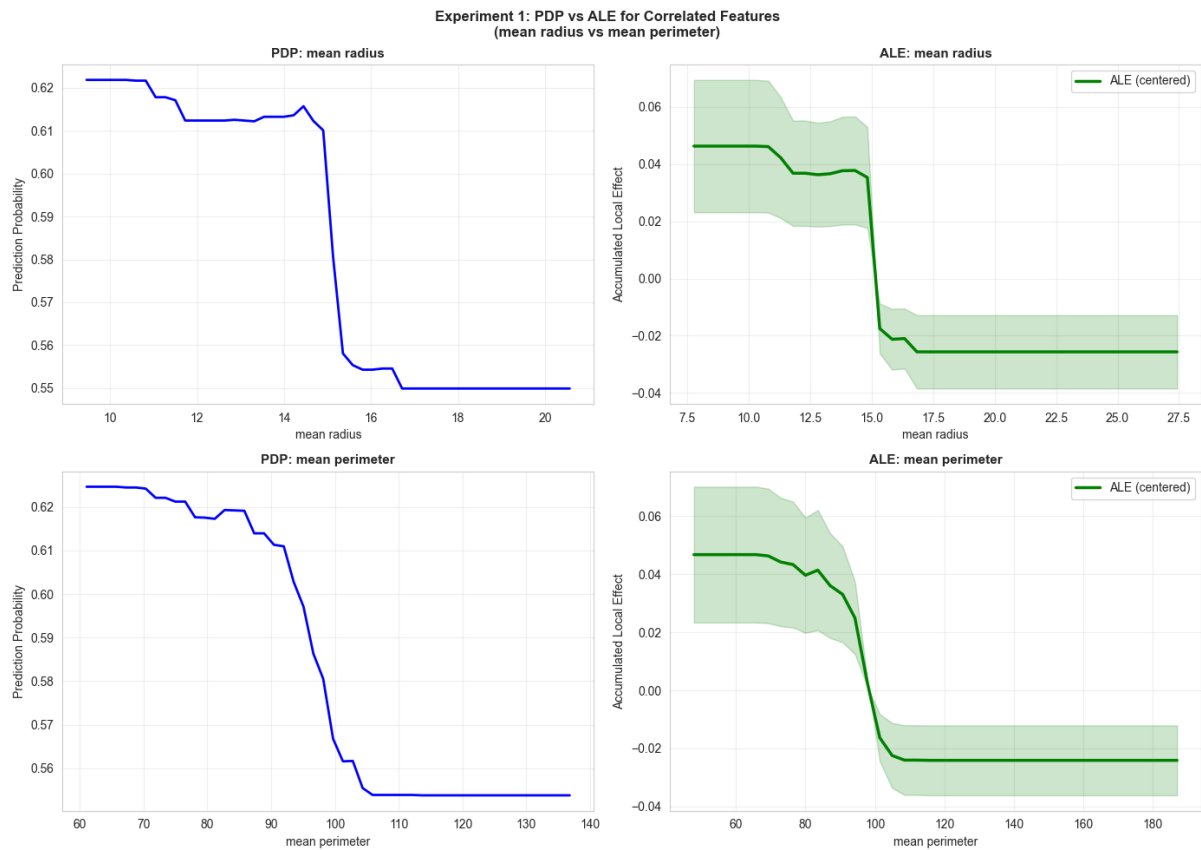


## Explainable AI Banana Problem – 2

### Global Feature Effect Exploration Report

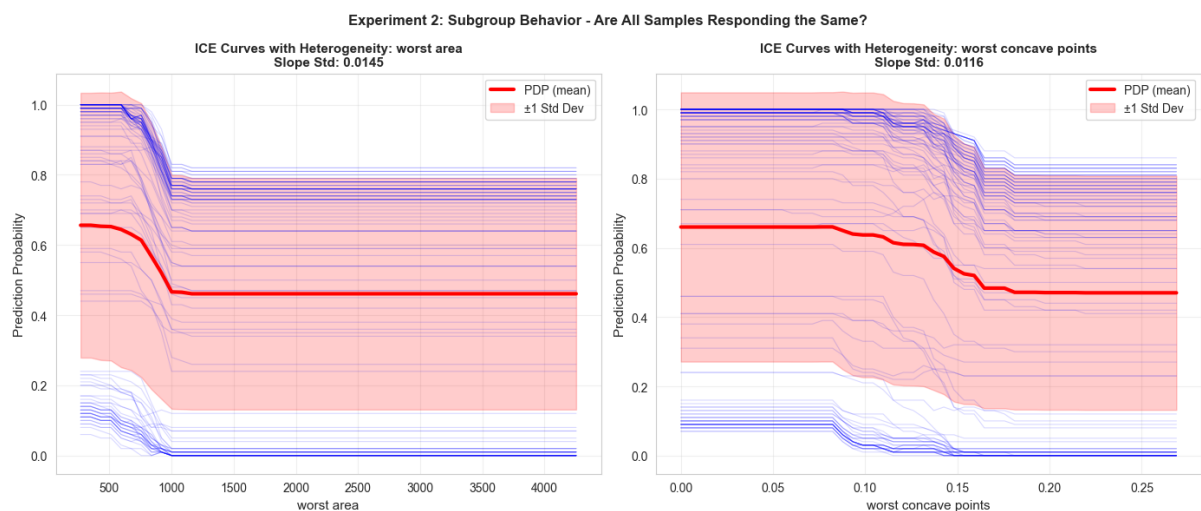
#### 1. PDP vs ALE:

PDP shows sharper drops for correlated features (mean radius and mean perimeter), indicating possible overestimation due to independence assumption. ALE provides smoother and more reliable local effects.



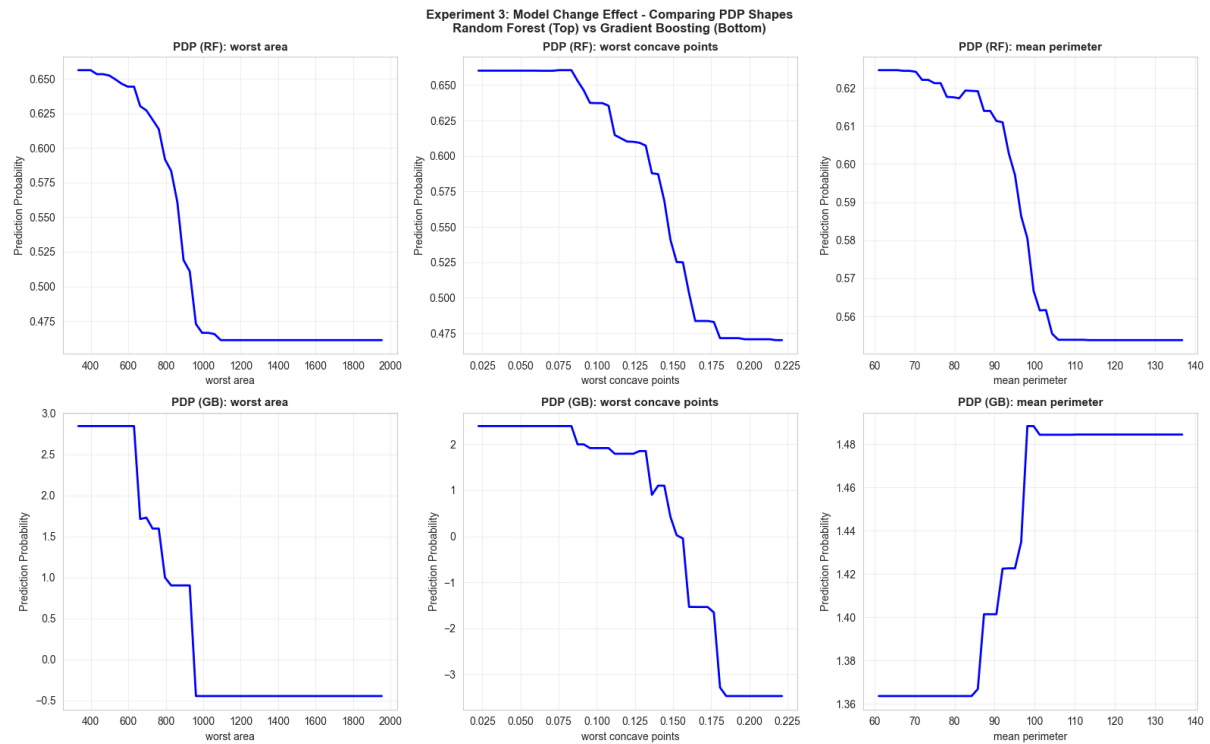
#### 2. ICE Curves

ICE curves show significant heterogeneity, meaning not all samples respond the same way to feature changes. This indicates feature interaction effects



### 3. Model Change Effect

Comparing Random Forest and Gradient Boosting shows that interpretation is model-dependent. Gradient Boosting exhibits sharper threshold behavior compared to Random Forest.



### PDP vs ICE vs ALE plot

Global Feature Effects: PDP vs ICE vs ALE (Random Forest)

