Responsible Machine Learning
Assignment 5
10 points

November 6, 2026

In Assignment 5, work alone or with a group to debug your best model from previous assignments. You may use AI tools, but you are responsible for validating and understanding your results.

1 Test Your Model in Recession Conditions.

Evaluate how your model performs when recession conditions are simulated. Describe the stress test, show its effect on model performance, and discuss what the results indicate about the model's sensitivity to economic conditions. Stress-testing is worth 5 points.

2 Analyze Residuals and Improve Model Performance.

Use residual analysis to investigate model errors and identify potential outliers, data issues, class imbalance, or other sources of poor performance. Apply and evaluate an appropriate remediation strategy, and compare results before and after remediation. Removing outliers, handling data imbalance, or another justified approach to increasing performance is worth up to 5 points. The class evaluation server will rank submitted models; report your model's leaderboard rank and the performance changes from your remediation.

3 Submit Code and Results.

Submit your code and predictions to the class evaluation server at a TBD URL. Keep your work in a public GitHub repository, or a private repository shared with the instructor (`jphall663`).

Your deliverables are due: TBD.