Problem: How severe can an airplane accident be?

**Feature Engineering:** I created features based on multiplication, division and aggregate features (mean, median,max,min,range,count etc) in relation with numerical and categorical variables and chose those which came on top of feature importances. Eg. Safety\_Score\*Days\_Since\_Inspection came out to be the topmost feature in newly created variables.

**Model:** Gradient Boosting Classifier seemed to be working best for the type of problem. Apart from that I tried LightGBM, Xgboost and Random Forest Classifier.

**Feature Selection:** A mix of Recursive Feature Elimination and Model’s default individual feature importance’s was used to pick out the features for final Model.

Final Submission was of ensemble of 3 types of models formed by 3,7 and 10 features and took the harmonic mean of probability of occurences.

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