

Project Plan:

1. Split work for modelling (Luwei & Mati) vs feature engg. & data exploration (Pallabi & Sunny).
2. Feature engg. would include trial and error methods to push R-squared value up, feature selection (either manually, to remove multi-collinearity or using lasso regression to regularise), ways to improve model performance if G1 and G2 are not used as predictors, etc.
3. Modelling: Neural networks, mlps, decision tree regressor, etc can be tried out for regression to predict grade.
4. Current approach would be to stick to a regression problem and maybe slot the numeric value predicted into letter grades after deciding the cutoff based on the boxplot for G3.
5. Would be helpful to check if we could predict G1 from other predictors to serve the use case of whether a student needs some help earlier on in the year in terms of tutors, etc.