

TP 12/10/2020

A rendre pour le 23/10/2020

- You can work in groups of 2
- Send 1 PDF file (name1\_name2.pdf) per group to: [benjamin.dalmas@emse.fr](mailto:benjamin.dalmas@emse.fr)
- The file should be written in English
- No need to send code, if you think (a part of) your code is important for us to see, please include a screenshot of only the relevant part in the PDF/Word file
- Explain all the steps you performed and all decision you made (e.g. changes to the data)

**Dataset:** “Modeling earthquake damage”. Note that this is a multiclass problem.

### **Naive Bayes Classifiers**

Use a NBC with different prior distributions (based on data or from apriori knowledge) and interpret the results you get.

### **Support Vector Machine**

Design a SVM and benchmark different kernel methods to approximate the best hyperplane.

### **Tree-based techniques**

Use a bagging approach with decision tree as classifier. Describe what happens in the method and any decisions you made. Try to optimize your method, describe what you did to increase performance. Interpret the results (what do the results mean?).