Assessment Form

Student: Alex Evans **Student CID:**
Marker: Klitos Savva

Technical Ability

- Correct application of the algorithm:
  - Cleaning of data present - spotted NaNs in decay modes. No discussion about outliers in other variables 7/10
  - Filtered variables using mutual information
  - Considered SVM, DT, RF, XGBoost classifiers
  - Significance not entirely correct
  - Played around with hyperparameters to increase generalisation & complexity
  - Trainings on all channels together at first, then individual

- Coding standards:
  - Good amount of commenting
  - Code easy to follow
  - Nice use of class and functions

- Using your knowledge to go further any try out different options to see if they are an improvement or not
  - See below

Communicating your results

- Evidence that you have thought about the problem and not just turn the handle 9/10
  - Discussion in the introduction showed that you thought about the task before starting
    - Discussion about the task and important features of the task
    - Discussion about the different types of ML models that might be useful for this task

- Evidence that you have considered different options and the reason why you have made the decisions that you did
  - Dropped decay modes when combining channels
  - Visualised individual variables to try and understand what will be useful for the model - on a process level
  - Explored parameter correlations
  - Discussed about what changing each hyper parameter might result into and why it might be useful. Later on showed how each hyperparameter affects the model
  - Discussed about the number of events belonging to each class. You also talked about the impact of a potential class imbalancing. Did you try to mitigate that with weights during training?
  - Had a look at feature importances, tried to tune the model based on that
  - Tried to assess predictions further with surrogate methods (literature)

- Presentation of conclusions:
    - Clarity and depth of explanation
        - Clear and contemporaneous record of your thought process
        - Discussions and conclusions present - Good
        - Nice discussion on what the individual trainings seem to be good at
    - Quality of graphs:
        - Good quality plots
        - Very informative plots, a bit too many plots but useful to say the least

Total

16/20