1. A model that allocates which mail folder an email should be sent to (work, friends, promotions, important), like Gmail's inbox tabs.

   Emails filters are one of the model in NLP to allocate which mail folder an email should be sent to. Several algorithm used in this process are
   1. Rule- based classification – specific criteria or keyword to determine the folder.
   2. Naïve Bayes classifier -To calculate the probability the mail belongs to.
   3. Support vector machine(SVM) – classify decision boundary – email belong to .
   4. Neural Networks- recurrent neural network, convolutional neural networks – complex pattern and emails belong to.
   5. Ensemble methods (bagging and boosting applied in multiple algorithms)- improve overall classification accuracy.
2. A model that helps decide what grade to award to an essay question. This can be used by a university professor who grades a lot of classes or essay competitions.

   The task of awarding the grade to an essay question needs multiple model those are
   1. Machine learning model : Use supervised learnings like Linear regression, support vector regression (SVR), Random forest regression – extract the features from essay.
   2. Natural language processing(NLP):sentiment analysis, topic modelling semantic analysis- content and structure of essay.
   3. Neural network: Recurrent neural network(RNN), Convolutional neural network(CNN) - prediction.
   4. Ensemble method : to obtain the accuracy.
3. A model that provides assistive technology for doctors to provide their diagnosis. Remember, doctors ask questions, so the model will use the patients' answers to provide probable diagnosis for the doctor to weigh and make decisions

   A model that provides assistive technology for doctors using multiple algorithms

   1. Bayesian Networks: Probability of different diagnosis based on symptoms.
   2. Decision Tree: Structural decision making process.
   3. Support vector machines(SVM): for complex decision boundaries and classify different diagnosis categories.
   4. Deep learning model: Recurrent neural network(RNN) predict the diagnosis.
   5. Ensemble method: To obtain accuracy.