Compulsory Task 1 – NLP Capstone Project

a. A model that allocates which mail folder an email should be sent to (work, friends, promotions, important), like Gmail's inbox tabs.
    a. Text classification & machine learning: uses pre-defined categories to organize emails based on the most suitable folder. Uses machine learning by training an AI program on a set of previous emails that were categorized as spam or not spam; the program uses this prior knowledge to classify new incoming emails (i.e. text of emails) as spam or not spam.
b. 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.
    a. Automatic evaluation & machine learning: A model classifies the quality of the essay writing and automatically assigns it a grade based on this quality. The classification could include things like automatically segmenting text, complexity of words, sentence structure, etc. in order to appropriately assign a grade.
c. 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. Semantic similarity & machine learning: AI programs identify patterns in a patient's response and use probabilities to make informed decisions; in this case uses the patient's response as an input, identifies any patterns in the symptoms (i.e. how similar are patient responses to 'known/training' responses and linked diagnosis) and then uses probabilities to make a recommendation on a diagnosis. Then the doctor will use their own judgement to compare the prediction and make an informed decision on the diagnosis.

The following resources helped me answer these questions:
https://www.dropbox.com/home/NL22110008057/Data%20Science%20(Fundamentals)/T20?di=left_nav_browse&preview=DS+T20+-+Introduction+to+NLP.pdf

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