

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

- Spam Email Detection: NLP models can be trained to identify and filter out unwanted spam or fraudulent emails by looking at the email's subject, content, sender information, and common spam patterns. This helps protect users from phishing or scam attempts by keeping their inboxes free from such messages.

B) A model that helps decide what grade to award to an essay question:

- Language Proficiency Evaluation: NLP systems can assess a person's language skills in tests like TOEFL or IELTS. By analysing their written or spoken responses, the models can evaluate their grammar, vocabulary, fluency, and coherence to provide a score that reflects their language proficiency level.

C) A model that provides assistive technology for doctors to provide their diagnosis:

- Electronic Health Record (EHR) Analysis: NLP techniques can extract relevant information from electronic health records, such as patient demographics, medical history, lab results, and radiology reports. Models can analyse this data to identify trends, flag potential risks or anomalies, and assist doctors in making accurate diagnoses or treatment decisions based on a comprehensive view of the patient's health profile.

In summary:

- The first example focuses on using NLP to detect and filter out spam emails, ensuring users don't receive fraudulent or unwanted messages and can be categorised as Semantic Similarity.
- The second example highlights NLP's role in evaluating language proficiency in tests by analysing writing or speaking responses which can be categorised as Language Proficiency Evaluation.
- The third example showcases how NLP can assist doctors by analysing electronic health records, identifying patterns, and providing valuable insights to support accurate diagnoses and treatment decisions which can be categorised as Document Similarity.