

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

- **Category: Text Classification**

- **Explanation:** This task involves classifying emails into different folders based on their content. Text classification models can analyze the text of the email and classify it into one of the predefined categories (work, friends, promotions, important).

**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.**

- **Category: Text Classification (if the grades are predefined categories) or Automatic Summarization (if summarizing key points)**

- **Explanation:** If the grading involves classifying the essays into predefined grades (A, B, C, etc.), it can be considered text classification. If the model needs to summarize the essay to assess its content, it could involve automatic summarization.

**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 diagnoses for the doctor to weigh and make decisions on.**

- **Category: Question Answering**

- **Explanation:** This task involves understanding the questions asked by doctors and the answers provided by patients to generate probable diagnoses. This falls under the category of question answering, as it requires interpreting natural language questions and providing relevant answers or suggestions.