DMT Project Proposal

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2. **Github:** https://github.com/2025-F-CS6220/project-project-aidatahunter

3. **Project Details:**

    a. **AI vs Human text dataset:** https://www.kaggle.com/datasets/shanegerami/ai-vs-human-text
    b. **About the data:** The dataset contains 500,000 essays that are either human generated or AI generated, and labelled accordingly. There are 2 columns - the text itself, as well as its corresponding label - 1 for AI, 0 for human
    c. **Few records from the dataset:**

	text	generated
0	Cars. Cars have been around since they became ...	0.0
1	Transportation is a large necessity in most co...	0.0
2	"America's love affair with it's vehicles seem...	0.0
3	How often do you ride in a car? Do you drive a...	0.0
4	Cars are a wonderful thing. They are perhaps o...	0.0

4. **Problem description:**

    a. The goal of the project is to predict whether a given text is AI generated or human generated, making this a binary classification problem. We plan on training different machine learning models on a labeled dataset of human and AI-generated essays, and provide a comparison of the different models in our report.
    b. The metrics we plan on using for this project are accuracy, precision, recall and F1 score. Accuracy helps us gauge how accurate the model is, whereas precision recall and F1 score tells us about true positives, true negatives, false positives and false negatives, and finally the ROC curve tells us the model's ability to distinguish across multiple thresholds.
    c. To ensure meaningful results, we will analyze misclassified records to identify common error patterns, evaluate model performance across groups such as short and long essays, and compare results from different algorithms to confirm stability and reliability.

Future scope:
Upon solving the current scope of the problem, if we have enough time, we would also like to explore detecting synthetic images and audio.