Write a book for BitLit, the PMLG Fringe World display

As part of the fringe festival exhibit, pitting humans against machines, we need a few examples of how excellent machines are at writing books. As members of the Perth Machine Learning Group, it would be awesome if you wanted to add to the library by training your own little machine learning model to produce text.
We will be taking the text and turning them into books for people to check out, be impressed or at least have a laugh at machine learning attempting to write the next literary masterpiece… or merely finish off the screenplay for Game of Thrones before George R. R. Martin can write the last book.

To create and submit your machine generated book follow these steps.

1. Find a corpus

- Choose a lengthy sample of text for the model to learn writing from. (add guidance on how many words minimum)
- The text sample may be a book, series of books, mash-up of books or other document styles with lots of text. Examples include:
    - All of the Harry Potter books
    - Eminem lyrics (Matt's idea!)
    - Combining 50 shades of grey + the bible
    - A bunch of different novels from the fantasy genre
    - A big cache of research papers on machine learning
- Search for an electronic copy of the text. Gutenberg is a great source of free books to use.

2. Clean up the text

- If your file is not .txt, you'll need to convert it. Try a .pdf to text converter or find another converter online.
- Delete all the irrelevant text that is easy to remove, but you don't want the model to train on e.g. publisher details, acknowledgements.
- If you want to build a larger text corpus running on multiple sources e.g. all the books in a series by one author, copy the text from all of them into one .txt file.

If you want to build your own model, skip ahead to step 5 for output instructions.
If you're a beginner and want to try a pre-written model, continue with step 3.

3. Set up Google Drive and Colab

- If you don't have one already, sign yourself up for a google account.
- Login to google drive and upload your text file, 'textsample.txt'
- Then access the bitlit version of the text generator, either through here on github or heading over to google colab and choosing open from github, finding pmlg/bitlit

4. Run the code, train the model

- Run the code in the notebook following the instructions, a few bitlit-specific points have been added.
- When you get to where you set the file path, you will need to authorise access to the file on your google drive by copying and entering the code.
- Make sure you have the file stored in the right location, update the file path and filename to match your setup.
- Runnnnnnnnnnnnnnn. Traaaaainnnnnnn.

5. Put together the outputs

- We're collecting the output text to go into a printable booklet.The template is in pmlg/bitlit
- Run the model with different seeds to generate enough unique text to fill the booklet (or more if you are able to).
- You might find that it starts to loop after a while or generate the same lines. This joke gets old quickly so minimise repetition by checking the output and deleting it.
- Option: Feed the text into a plagiarism detector as another check your model is not just regurgitating what it has read, it's actually forming new sentences and not copying. Although sometimes these aren't very good and highlight sentences that are different but composed of the same words (no link yet because we don't have a good one).
- Come up with a title for your booklet. Try to be a little humorous, hint at the content without copying the title of the source material exactly. Bonus points if you can make a 'machine version' e.g. 50 shades of greyscale as a machine generated version of 50 shades of grey.
- Create your cover art. Two options here:
    - Put your title or a description of the book into caption to image generator such as:
        - https://t2i.cvalenzuelab.com/
        - https://deepai.org/machine-learning-model/text2img
        - https://medium.com/@animeshsk3/t2f-text-to-face-generation-using-deep-learning-b3b6ba5a5a93

        -
    - Pick an image associated with the source material and run it through style transfer such as:
        - https://deepart.io/
        - http://www.pikazoapp.com/
    - Or try these
        - https://ganbreeder.app/
        - https://colab.research.google.com/github/tensorflow/hub/blob/master/examples/colab/biggan_generation_with_tf_hub.ipynb

- Get the template and make sure you've added in all the text, you've entered the title and copied in the cover image, and then add your name to the back page.
- Submit your completed book template to the pmlg slack #fringeproject channel or (link coming).

Well done and thanks for contributing to the PMLG fringe project.