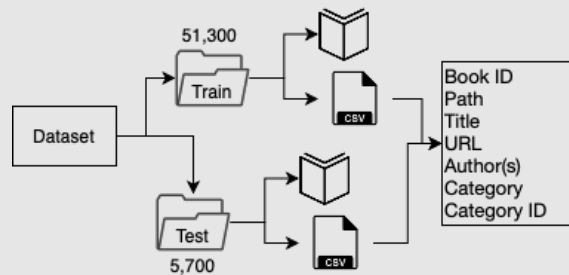


Judge a Book By Its Cover

Problem Definition

The project we're working on aims to identify the genre(s) of a certain book simply by conducting an analysis on its front cover. And this would be done by creating models that learn to differentiate between those genres based on the textual and visual features present in the cover.

Dataset Description



Investigated models

Visual features

1. ResNet50
2. InceptionResNetV2
3. VGGNet-16

Textual features

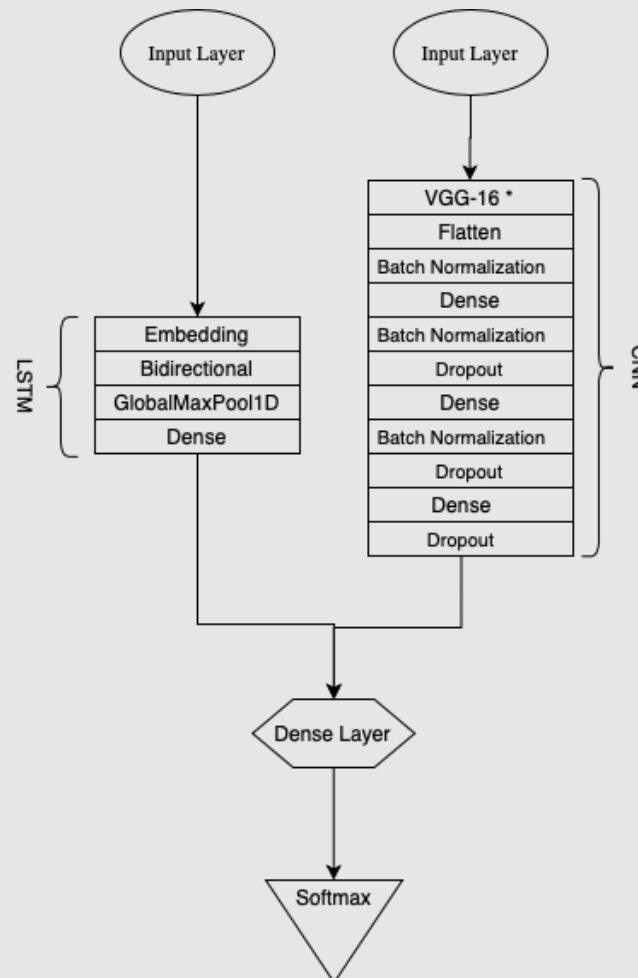
1. Bi-directional LSTM
2. Bag of Words model

Combining Visual & textual features

1. Multimodal Neural Network

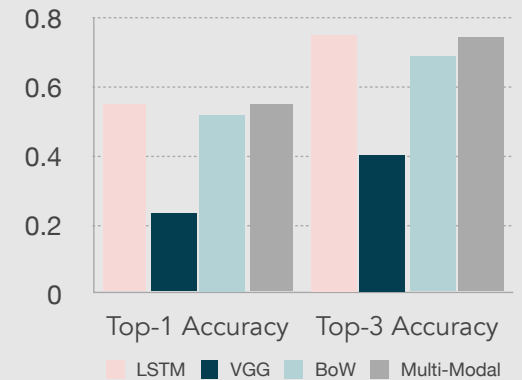
Experiments

1. Pre-process titles
2. Pre-process book covers
3. Used random search with different hyper-parameters on each of the LSTM, VGG and BoW
4. Choose best visual based model and the best textual based model to build our Multimodal Neural Network



Results

Table 1: Results of the experiments conducted on the test set



Conclusion

1. Predictions based on textual features are more accurate than those based on the visual ones
2. Predicting genre of a book is tricky because of the high similarity between some of the categories

References

- <https://github.com/uchidalab/book-dataset/tree/master/Task1>
- Chiang, Holly, et al. "Classification of Book Genres By Cover and Title." Retrieved from <https://www.semanticscholar.org/paper/Classification-of-Book-Genres-By-Cover-and-Title-Chiang-Ge/d0d0096d307a6da1332153b9cb8a72c29df38f87>
- Uchida, Seiichi, et al. "Judging a Book by its Cover" 13 October 2017 Retrieved from <https://arxiv.org/pdf/1610.09204v3.pdf>
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