CSCE 5290: Natural Language Processing
Project Proposal

Project Proposal

Each project group should propose an idea of the project they will work on this semester. This can be refined throughout the semester.

Project Proposal Description:

The project proposal should be composed of the following

1. Project Title and Team Members

Project Title: Paid Positivity: Product Review Generator

Name	Email
Michael Moore	MichaelMoore7@my.unt.edu
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Github: https://github.com/MichaelClayMoore/CSCE_5290_project

2. Goals and Objectives:

• **Motivation**

- "152 billion dollar problem" Fake reviews take up an estimated 4% of all online reviews. Although many consider populating items with fake reviews unethical, the market for these reviews is undeniably large. Often these reviews are copy & pasted over many profiles and easily detectable. Our motivation is to make a model to generate unique reviews based on the product's information.

• **Significance**
  - The significance of the project comes from the amount of money that can be made from the application of the model. The market for fake reviews is estimated to influence $3.8 trillion of global e-commerce spend in 2021 according to theprint.com. A model that created non generic & unique reviews would be extremely valuable for the market.
  - This project will help solidify the lessons taught in class by practically working with a text-based dataset and a neural network.

• **Objectives**:
  - To generate fake reviews given a product name, category with a possibility to include a rating.

• **Features & Example Data**

Feature Name	Origin	Description	Example
asin	Reviews & Metadata	ID of the product	0000031852
title	Metadata	Name of the product	TUTU Botiquecutie TM Girls Ballet Zebra Hot Pink
price	Metadata	Price of the product	17.99
imURL	Metadata	Product image url	https://m.media-amazon.com/images/I/718HTZfwz6L._AC_SX679_.jpg
related	Metadata	Products related to the product	Also bought: {"B00JHONN1S"} Also viewed: {"B002BZX8Z6"}
salesRank	Metadata	Sales rank information for product	{"Toys & Games": 211836}

brand	Metadata	Product Brand	Coxlures
categories	Metadata	Product sales categories	[["Sports & Outdoors", "Other Sports", "Dance"]]
reviewerID	Reviews	ID of the reviewer	A2SUAM1J3GNN3B
reviewerName	Reviews	Name of reviewer	J. McDonald
helpful	Reviews	Helpfulness of review	2, 3
reviewText	Review	Review Text	"I bought this for my husband who plays the piano. He is having a wonderful time playing these old hymns. The music is at times hard to read because we think the book was published for singing from more than playing from. Great purchase though!"
overall	Review	Rating of review	5.0
summary	Review	Summary of review	Heavenly Highway Hymns
unixReviewTime	Review	Time of review (unix time)	1252800000
reviewTime	Review	Time of review (raw)	09 13, 2009

3. **References**

- Dataset: http://jmcauley.ucsd.edu/data/amazon/
- Ups and downs: Modeling the visual evolution of fashion trends with one-class collaborative filtering, R. He, J. McAuley, WWW, 2016
- Image-based recommendations on styles and substitutes, J. McAuley, C. Targett, J. Shi, A. van den Hengel, SIGIR, 2015