Text Classification

Objective is to create a text classification model which can predict product sub-category based on product description.

Result

- **Training:**
  - **Accuracy: 98.5%**
  - **F1Score: 98.5%**

- **Evaluation:**
  - **Accuracy: 88.6%**
  - **F1Score: 88.6%**
  -
- **Classwise Models Performance**

Classes	Accuracy
Active Pants	0.893939393939393 9
Bags	1.0
Belts	0.833333333333333 4
Boots	0.789473684210526 3
Boxers & Briefs	0.967741935483871
Cardigans	0.923076923076923 1
Chinos	0.892857142857142 9
Coats	0.333333333333333 3
Cufflinks	1.0
Denim	0.866666666666666 7

Derbys	**0.8333333333333334**
Eyewear	**0.9558823529411765**
Gloves	**1.0**
Hats	**0.8888888888888888**
Jackets	**0.8235294117647058**
Jewelry	**0.25**
Loafers	**0.9230769230769231**
Loungewear	**1.0**
Overshirts	**0.92**
Oxfords	**0.875**
Pants	**0.3076923076923077**
Pins and Clips	**nan**
Pocket Squares	**1.0**
Polos	**0.9629629629629629**
Robes	**1.0**
Sandals	**0.7727272727272727**
Scarves	**0.4**
Shirts	**0.5833333333333334**
Shorts	**0.8518518518518519**

Slides/Slipper	**0.8421052631578947**
Sneakers	**0.9375**
Socks	**0.7647058823529411**
Suits	**0.9166666666666666**
Sweaters	**0.75**
Sweatshirts/Hoodies	**0.8648648648648649**
T-Shirts	**0.9836065573770492**
Tech Accessories	**0.972972972972973**
Ties	**1.0**
Tuxedos	**0.9259259259259259**
Vests	**1.0**
Wallets	**1.0**
Watches	**1.0**

Based on above class wise accuracy analysis we can deduce below products classification is not performing well, assuming a reasonable performance to be 70%:

1. **Coats**
2. **Jewelry**
3. **Pins and Clips**
4. **Scarves**
5. **Shirts**