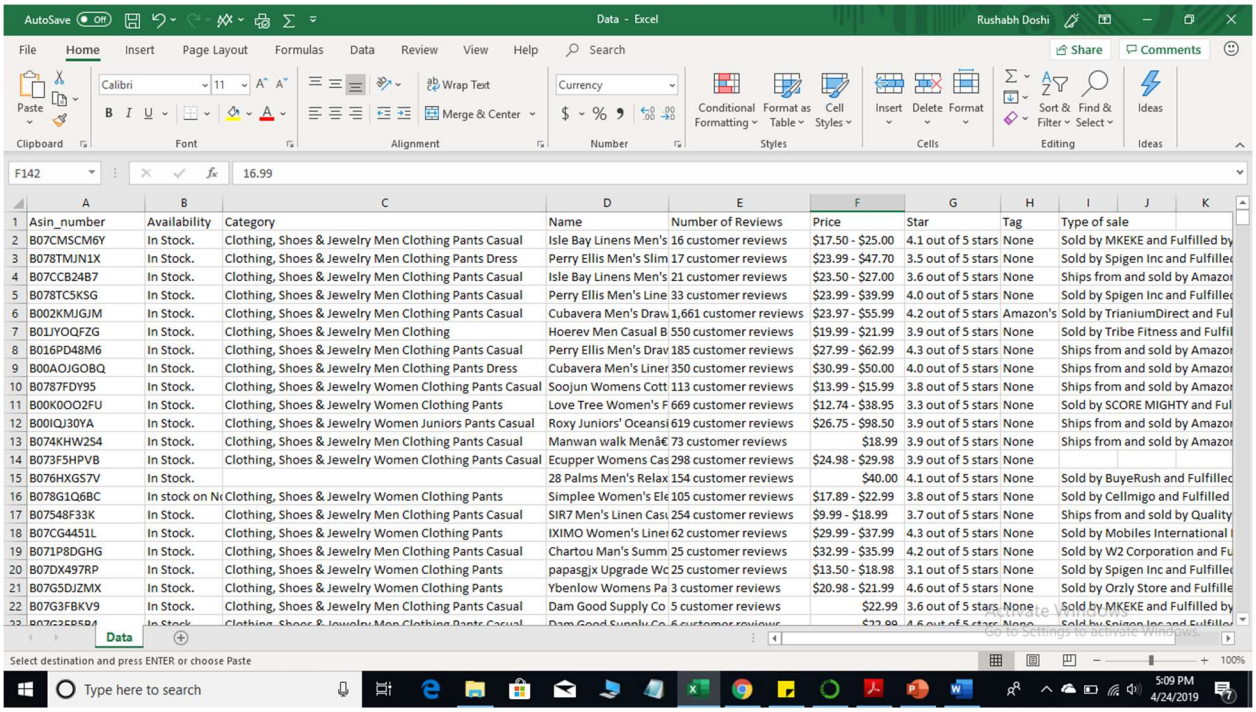
Rushabh Doshi
Amazon choice Prediction Model
MIS 637 Project

Problem Statement

Predicting amazon's best products by category, by doing textual analysis on product description, reviews & rating and build a model that will be helpful to the customer in classifying which product is best suitable for the category he/she wants to purchase in.

Dataset



Asin_number	Availability	Category	Name	Number of Reviews	Price	Star	Tag	Type of sale
B07CMSCM6Y	In Stock.	Clothing, Shoes & Jewelry Men Clothing Pants Casual	Isle Bay Linens Men's	16 customer reviews	$17.50 - $25.00	4.1 out of 5 stars	None	Sold by MKEKE and Fulfilled by
B078TMJN1X	In Stock.	Clothing, Shoes & Jewelry Men Clothing Pants Dress	Perry Ellis Men's Slim	17 customer reviews	$23.99 - $47.70	3.5 out of 5 stars	None	Sold by Spigen Inc and Fulfille
B07CCB24B7	In Stock.	Clothing, Shoes & Jewelry Men Clothing Pants Casual	Isle Bay Linens Men's	21 customer reviews	$23.50 - $27.00	3.6 out of 5 stars	None	Ships from and sold by Amazor
B078TC5KSG	In Stock.	Clothing, Shoes & Jewelry Men Clothing Pants Casual	Perry Ellis Men's Line	33 customer reviews	$23.99 - $39.99	4.0 out of 5 stars	None	Sold by Spigen Inc and Fulfille
B002KMJGJM	In Stock.	Clothing, Shoes & Jewelry Men Clothing Pants Casual	Cubavera Men's Draw	1,661 customer reviews	$23.97 - $55.99	4.2 out of 5 stars	Amazon's	Sold by TrianiumDirect and Ful
B01JYOQFZG	In Stock.	Clothing, Shoes & Jewelry Men Clothing	Hoerev Men Casual B	550 customer reviews	$19.99 - $21.99	3.9 out of 5 stars	None	Sold by Tribe Fitness and Fulfil
B016PD48M6	In Stock.	Clothing, Shoes & Jewelry Men Clothing Pants Casual	Perry Ellis Men's Drav	185 customer reviews	$27.99 - $62.99	4.3 out of 5 stars	None	Ships from and sold by Amazor
B00AOJGOBQ	In Stock.	Clothing, Shoes & Jewelry Men Clothing Pants Dress	Cubavera Men's Liner	350 customer reviews	$30.99 - $50.00	4.0 out of 5 stars	None	Ships from and sold by Amazor
B0787FDY95	In Stock.	Clothing, Shoes & Jewelry Women Clothing Pants Casual	Soojun Womens Cott	113 customer reviews	$13.99 - $15.99	3.8 out of 5 stars	None	Ships from and sold by Amazor
B00K0OO2FU	In Stock.	Clothing, Shoes & Jewelry Women Clothing Pants	Love Tree Women's F	669 customer reviews	$12.74 - $38.95	3.3 out of 5 stars	None	Sold by SCORE MIGHTY and Ful
B00IQJ30YA	In Stock.	Clothing, Shoes & Jewelry Women Juniors Pants Casual	Roxy Juniors' Oceansi	619 customer reviews	$26.75 - $98.50	3.9 out of 5 stars	None	Ships from and sold by Amazor
B074KHW2S4	In Stock.	Clothing, Shoes & Jewelry Men Clothing Pants Casual	Manwan walk Menâ€	73 customer reviews	$18.99	3.9 out of 5 stars	None	Ships from and sold by Amazor
B073F5HPVB	In Stock.	Clothing, Shoes & Jewelry Women Clothing Pants Casual	Ecupper Womens Cas	298 customer reviews	$24.98 - $29.98	3.9 out of 5 stars	None	
B076HXGS7V	In Stock.		28 Palms Men's Relax	154 customer reviews	$40.00	4.1 out of 5 stars	None	Sold by BuyeRush and Fulfillec
B078G1Q6BC	In stock on N	Clothing, Shoes & Jewelry Women Clothing Pants	Simplee Women's Ele	105 customer reviews	$17.89 - $22.99	3.8 out of 5 stars	None	Sold by Cellmigo and Fulfilled
B07548F33K	In Stock.	Clothing, Shoes & Jewelry Men Clothing Pants Casual	SIR7 Men's Linen Cas	254 customer reviews	$9.99 - $18.99	3.7 out of 5 stars	None	Ships from and sold by Quality
B07CG4451L	In Stock.	Clothing, Shoes & Jewelry Women Clothing Pants	IXIMO Women's Liner	62 customer reviews	$29.99 - $37.99	4.3 out of 5 stars	None	Sold by Mobiles International
B071P8DGHG	In Stock.	Clothing, Shoes & Jewelry Men Clothing Pants Casual	Chartou Man's Summ	25 customer reviews	$32.99 - $35.99	4.2 out of 5 stars	None	Sold by W2 Corporation and Fu
B07DX497RP	In Stock.	Clothing, Shoes & Jewelry Women Clothing Pants	papasgjx Upgrade Wc	25 customer reviews	$13.50 - $18.98	3.1 out of 5 stars	None	Sold by Spigen Inc and Fulfille
B07G5DJZMX	In Stock.	Clothing, Shoes & Jewelry Women Clothing Pants	Ybenlow Womens Pa	3 customer reviews	$20.98 - $21.99	4.6 out of 5 stars	None	Sold by Orzly Store and Fulfille
B07G3FBKV9	In Stock.	Clothing, Shoes & Jewelry Men Clothing Pants Casual	Dam Good Supply Co	5 customer reviews	$22.99	3.6 out of 5 stars	None	Sold by MKEKE and Fulfilled by

Relevant Methods

For this dataset, the techniques I will be applying for the same are as follows:

1. KNN

2. Decision Tree

3. Random Forest

I will be leveraging these algorithms and predict accuracy for each one of them.

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Software Package

1. Python (For General Programming)
2. Sklearn (Python Package to implement Decision Tree algorithm)
3. Libraries: Pandas, NumPy, Scikit, Matplotlib
4. Web Scraping: BeautifulSoup and Selenium
5. NLP Libraries: nltk and SpaCy