



Sentiment Analysis of Product Reviews

BY FILIZ CAMUZ

Business Problem



CUSTOMER
EXPERIENCE (CX)



VOICE OF
CUSTOMER (VOC)



STRATEGIC
DECISIONS

Bussiness Value



LIKES /DISLIKES



PRODUCT REVIEW
COMPARISON



REAL TIME CX
DATA

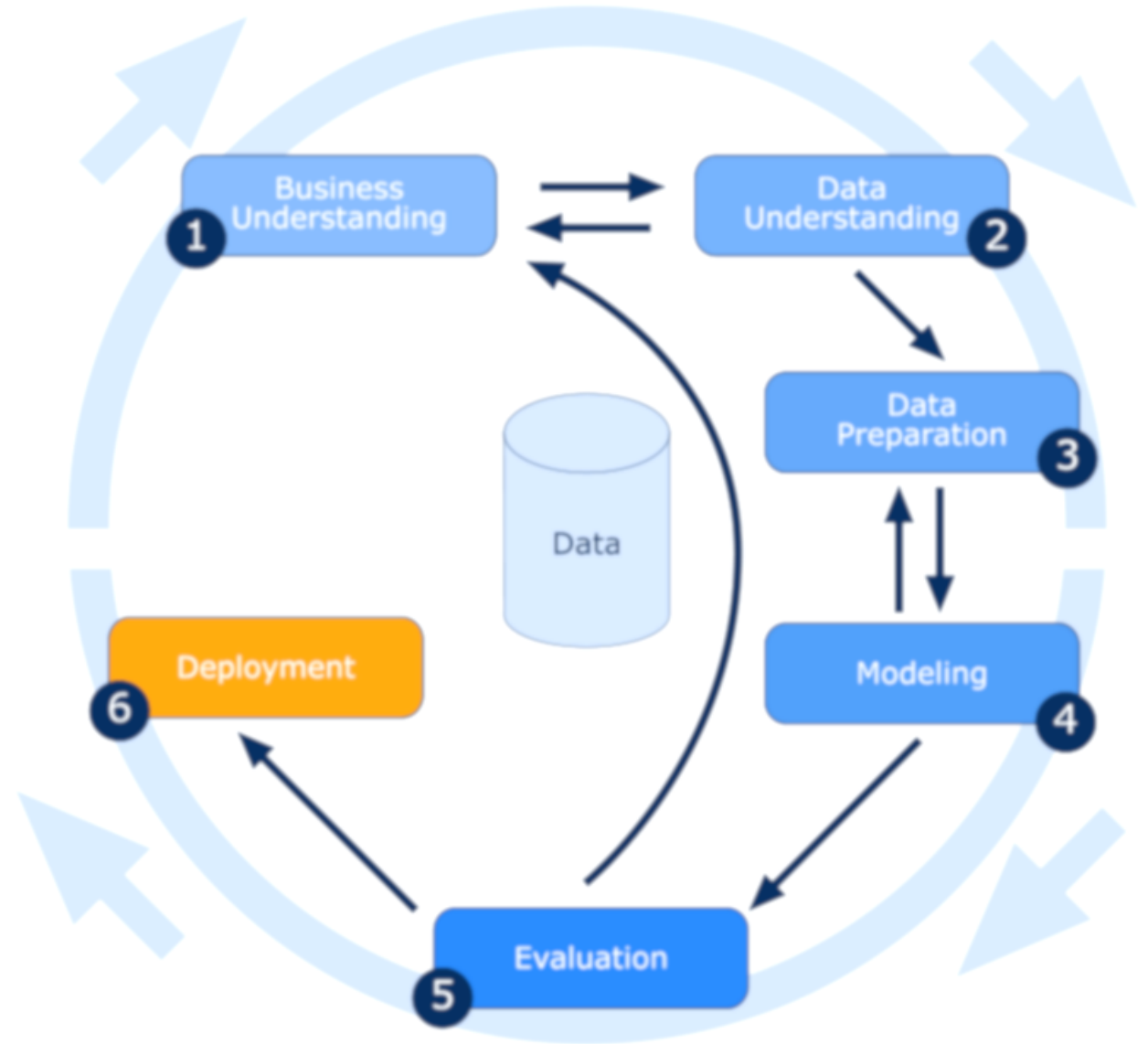


SAVE TIME

Methodology

CRISP-DM

(Cross Industry Standard
Process for Data Mining)



Dataset

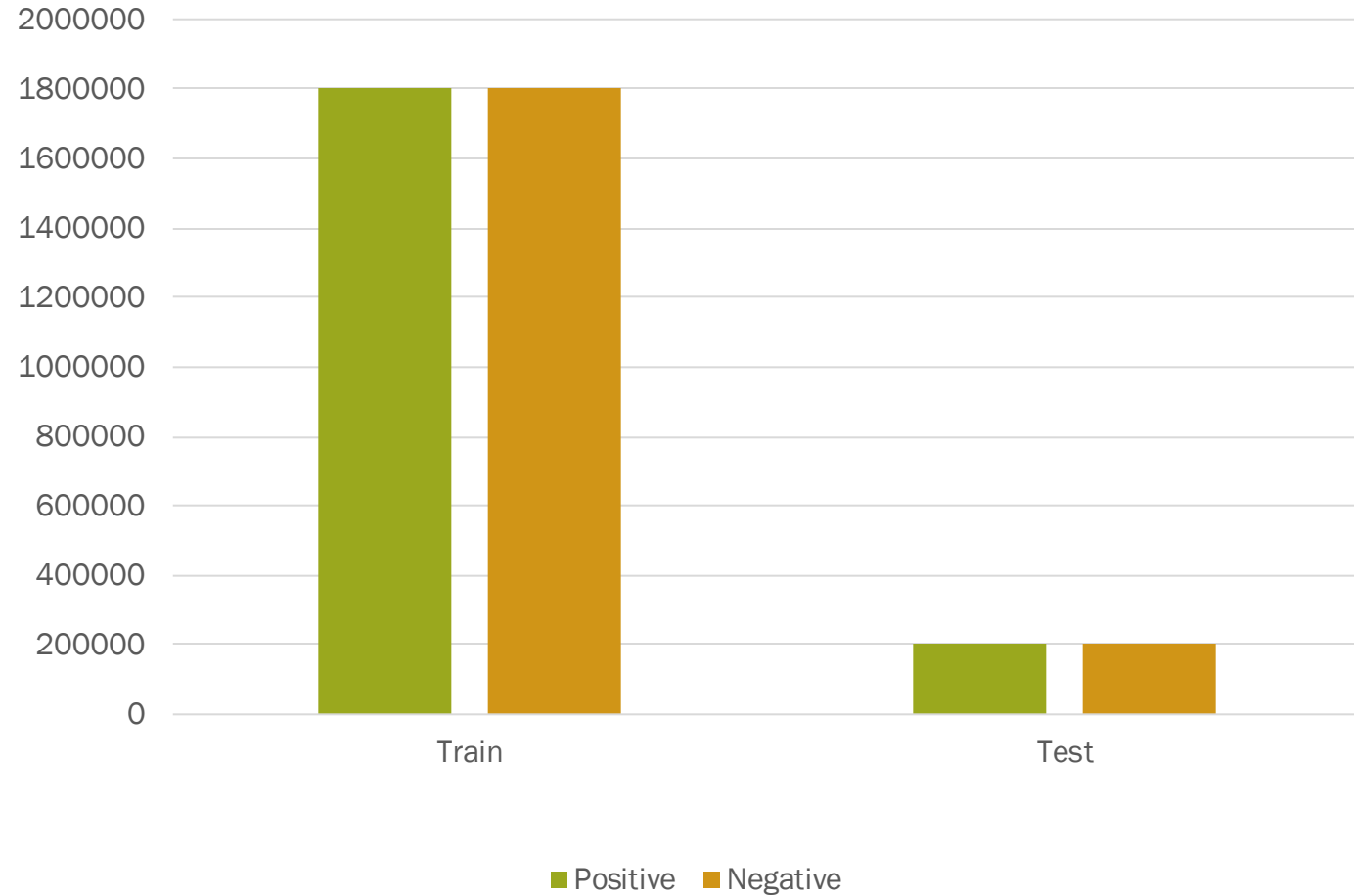


AMAZON PRODUCT
REVIEWS DATASET



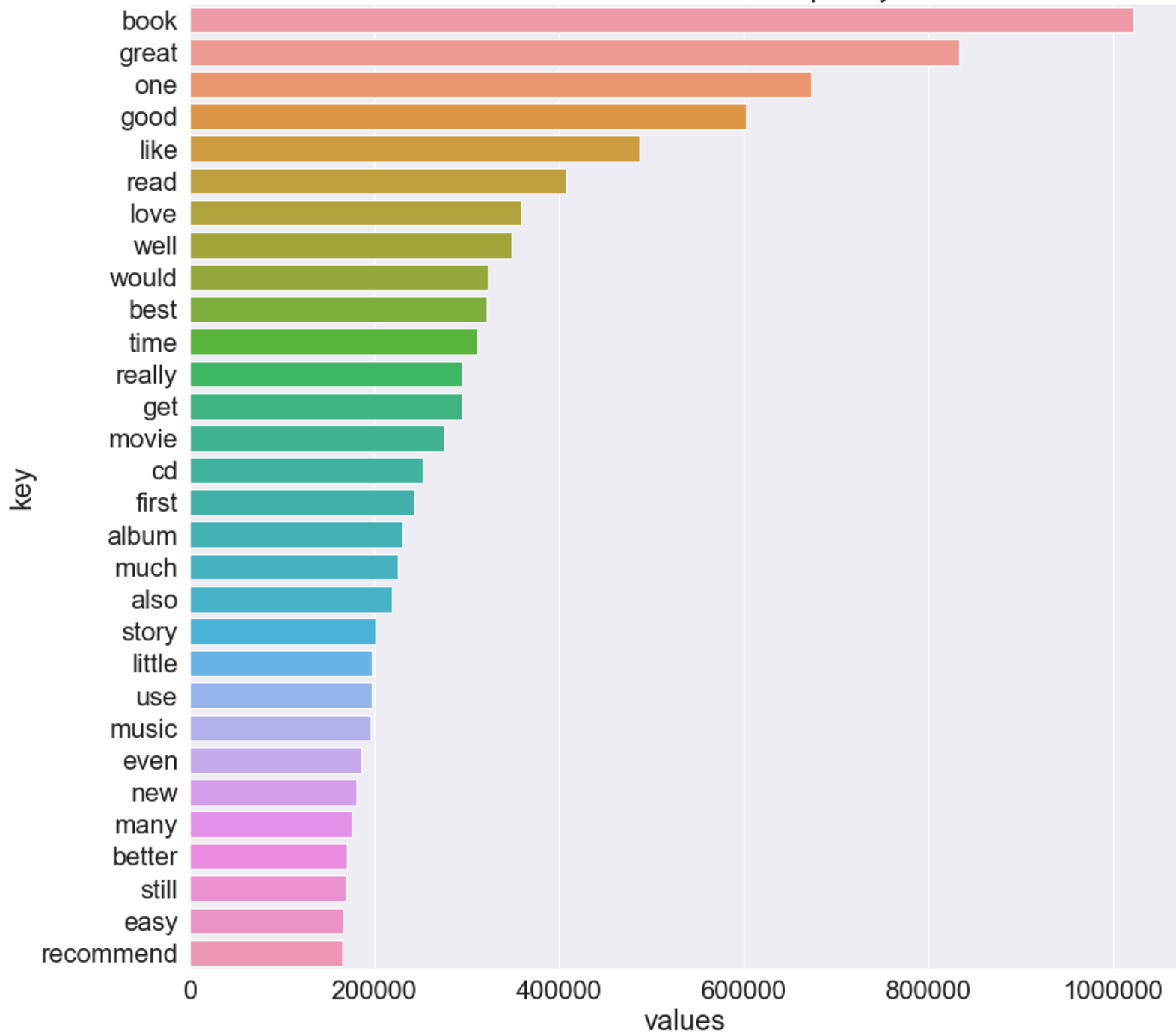
4,000,000 PRODUCT
REVIEWS

Chart Title



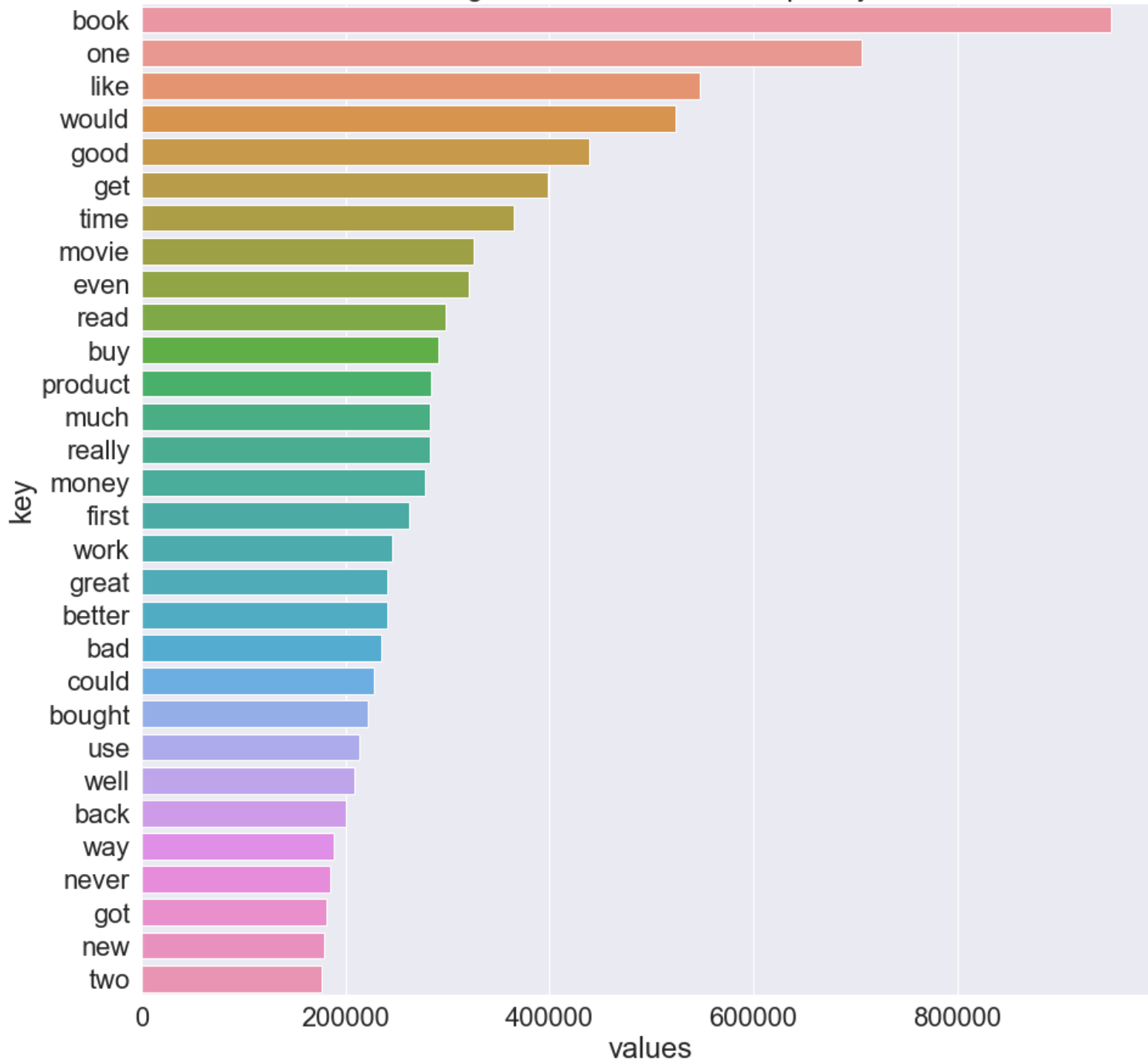
Label
Balance

Positive Reviews Word Frquency



Word Frequency

Negative Reviews Word Frequency

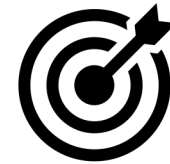
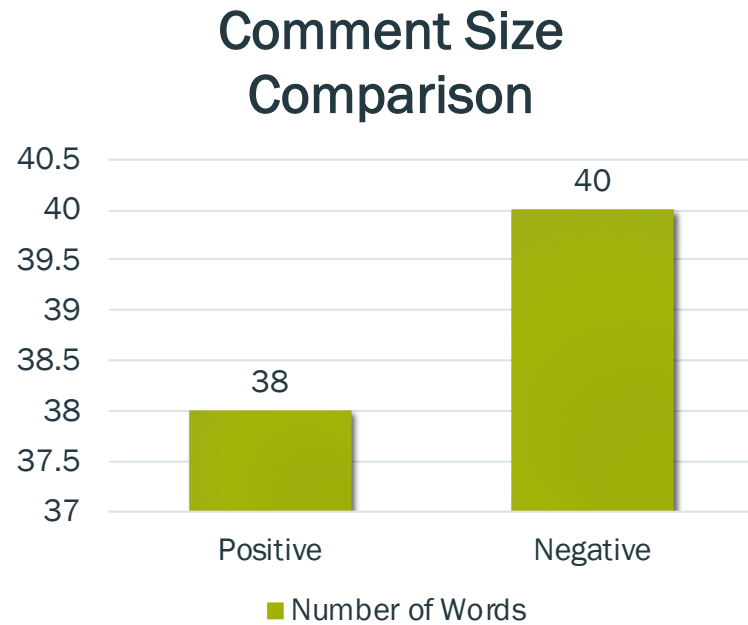


Word Frequency



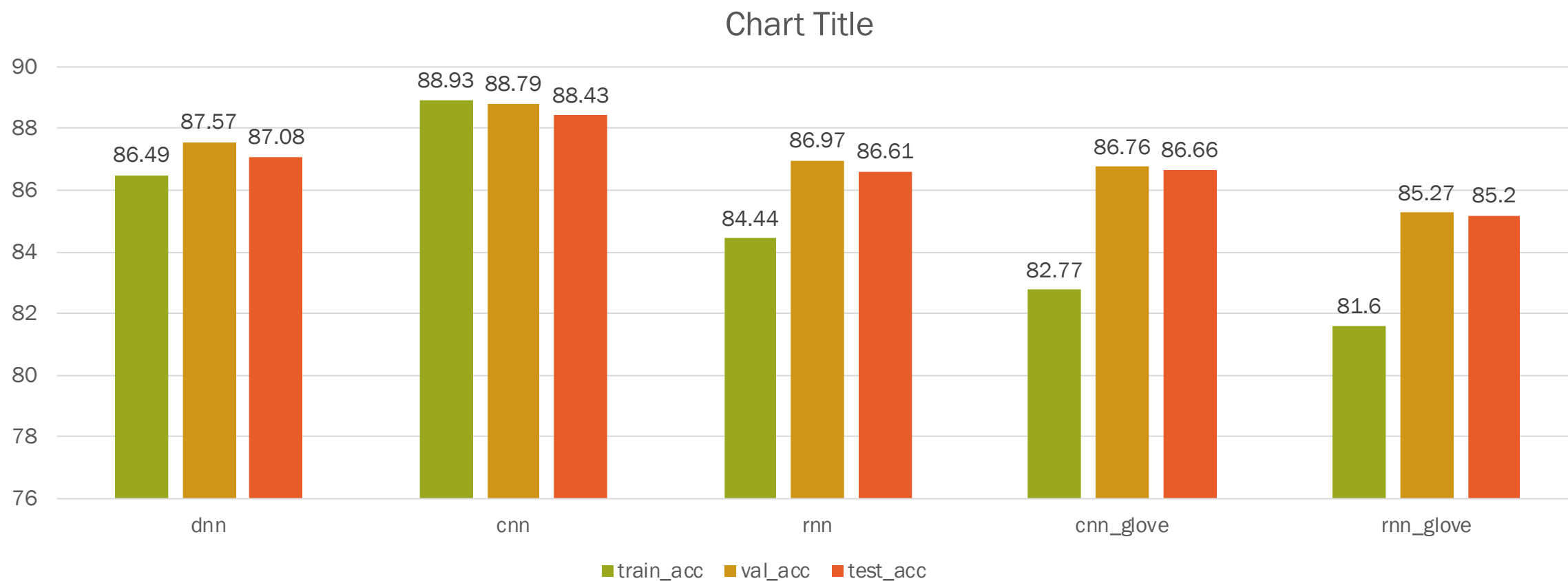
Bookworms likes
to review more

Comment Size



Pay attention to longer comments!

Deep Learning Models



Best Model

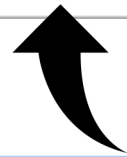
Convolutional Neural Network



91% Accuracy


Demonstration

Enter Amazon Product Url-






← → ↻ 🏠 🔒 https://www.amazon.com/dp/B00101GDIG/ref=psdc_2975515011_t1_B0002DHOE0

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26W

Exo Terra Repti-Glo 10.0 Compact Fluorescent Desert Terrarium Lamp

Demonstration

Enter Amazon Product Url- https://www.amazon.com/dp/B00101GDIG/ref=psdc_2975515011_t1_B0002DH0E0

There are 21 reviews in for this product on this page

Predictions

['N', 'P', 'P', 'P', 'P', 'P', 'P', 'P', 'P', 'P', 'N', 'P', 'P', 'P', 'P', 'P', 'P', 'N', 'P', 'P', 'P', 'P']

Actual Rates

['1', '3', '5', '5', '5', '3', '5', '5', '5', '5', '1', '5', '5', '5', '5', '5', '5', '5', '5', '5', '5']

List of negative comments

=====

I've always used Reptisun bulbs but a while back, I decided try Exo Terra's bulb after reading about their new line of UVB lights on their website. For that previous build, I ordered a 26 watt UVB 100 bulb (formerly sold as Repti Glo 5.0 per the label) and a 26 watt Natural Light (formerly Repti Glo 2.0) but while the Natural Light fired right up (and I am quite happy with it), the UVB was dead on arrival. The UVB100 was replaced twice by Amazon but both of those were defective, too- only 1 of the coils lit.... the others were dead; so, I returned to Reptisun lights. For this latest terrarium build, I needed a 13w 10.0 Desert lamp (aka UVB150 which is the old Repti-Glo 10.0). I checked prices and as Exo-Terra bulbs were half the price of the Reptisun at the time, I decided to try one. I was hoping to get lucky and that the issue was only with the tropical bulbs (UVB100), so I ordered one- but, again, I received a defective bulb (only the first coil lights up, the others are dead). I'm not going to request a replacement this time - I went down that road before - but, instead, I'll go ahead and pay the extra for Reptisun so I get a bulb that I know will work. Outside of the UVB line, I use Exo-Terra lamps exclusively and it appears that it is just their newly designed UVB's that are problematic (I'm 4 for 4 in terms of bad bulbs); however, the Natural Light bulb which is the old Repti-Glo 2.0 work well. For comparison purposes, I've now purchased approximately 2 dozen Reptisuns through Amazon, and only two have had issues- both which came bundled with a fixture. The last time, I contacted ZooMed and they immediately replaced the bulb so I cannot complain. It's a shame as the Exo-Terra line looked promising but I'll only purchase Reptisun bulbs from here on out. I've included some photos (UVB100 aka Repti-Glo 5.0, UVB150 aka Repti-Glo 10.0, Natural Light aka Repti-Glo 2.0 and a Reptisun 13w mini cf) for comparison. UPDATE: Ordered the Reptisun and it arrived fully functional. Not sure why Exo-Terra is having such an issue with theirs

Future Works



For customer use :

Create a web app
Customize web scraping



For model performance:

Creating Bigrams
Compare word scoring methods

Thank you



Please feel free reach me for any questions :



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