

Improved Product Recommendation System



Improved Product Recommendations

2

Problem Statement & Benefits

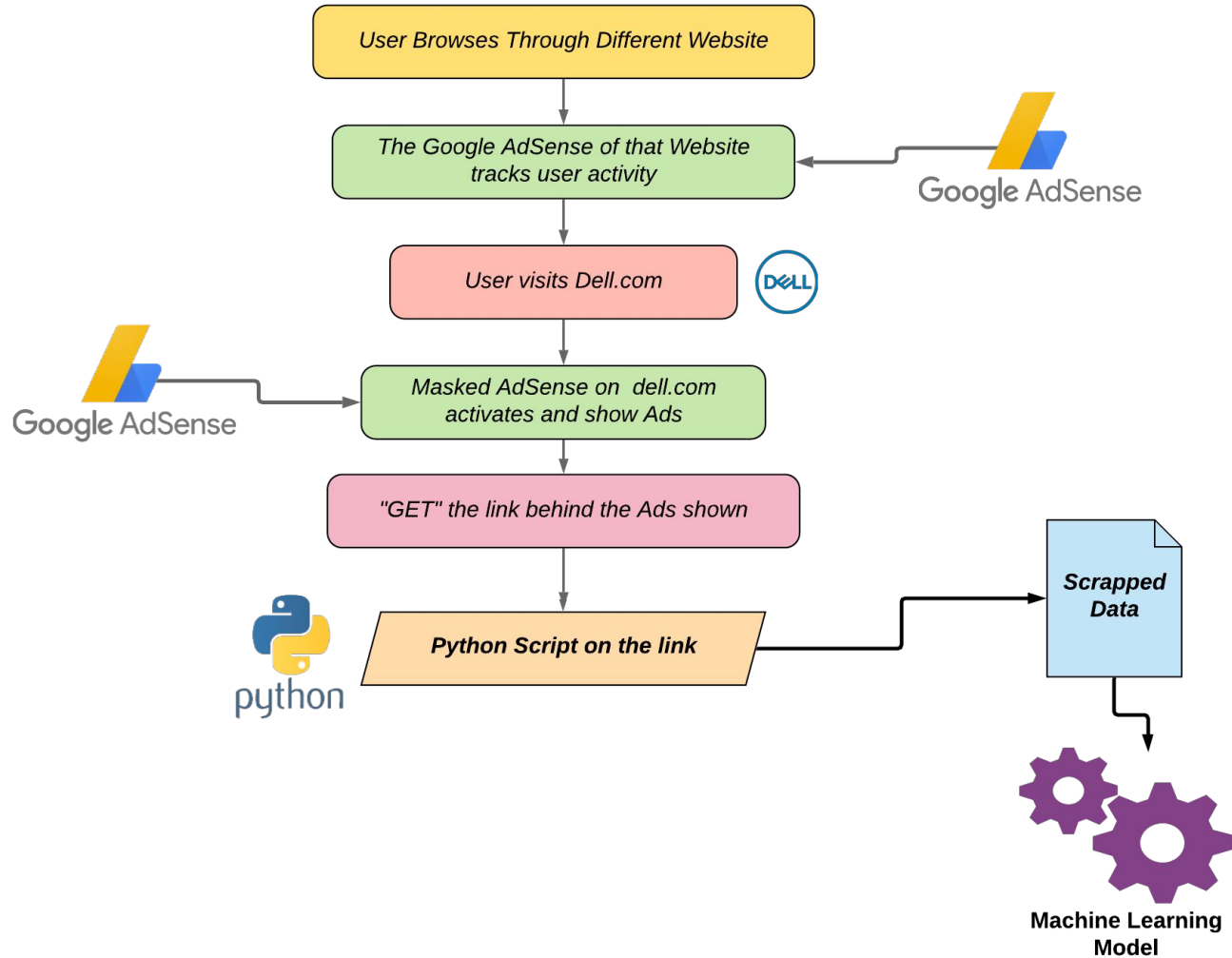
- Improved product recommendations – Based on user's browsing habits across the IT domain, an improved recommendation engine can give bigger surface area for Sales team as well as can improve online product recommendation for customers
- Benefits of reviews are multifold –
- Better Order Conversion rate
- Great customer experience
- Improved revenues

Expected Outcome

- Demo should be the following usecases
- User should browse multiple websites for gaming laptops
- Once User land on Dell.com, user should be prompted with recommendations based on the search on other websites
- User should also be recommended within the price range they have been searching on other websites
- User should also be prompted with other gadgets that can go along with the recommendation
- User should also be given chance to browse other products if the recommended products are not added to Cart
- User should be given a comments box to enter the reason for not purchasing recommended products (this will help further refine the AI engine)
- Backend Analytics system should build the data on how the recommendation engine working from Revenue/Customer experience and Order conversion point of view. (This will be internal to Company and not customer facing)

Expected Outcome

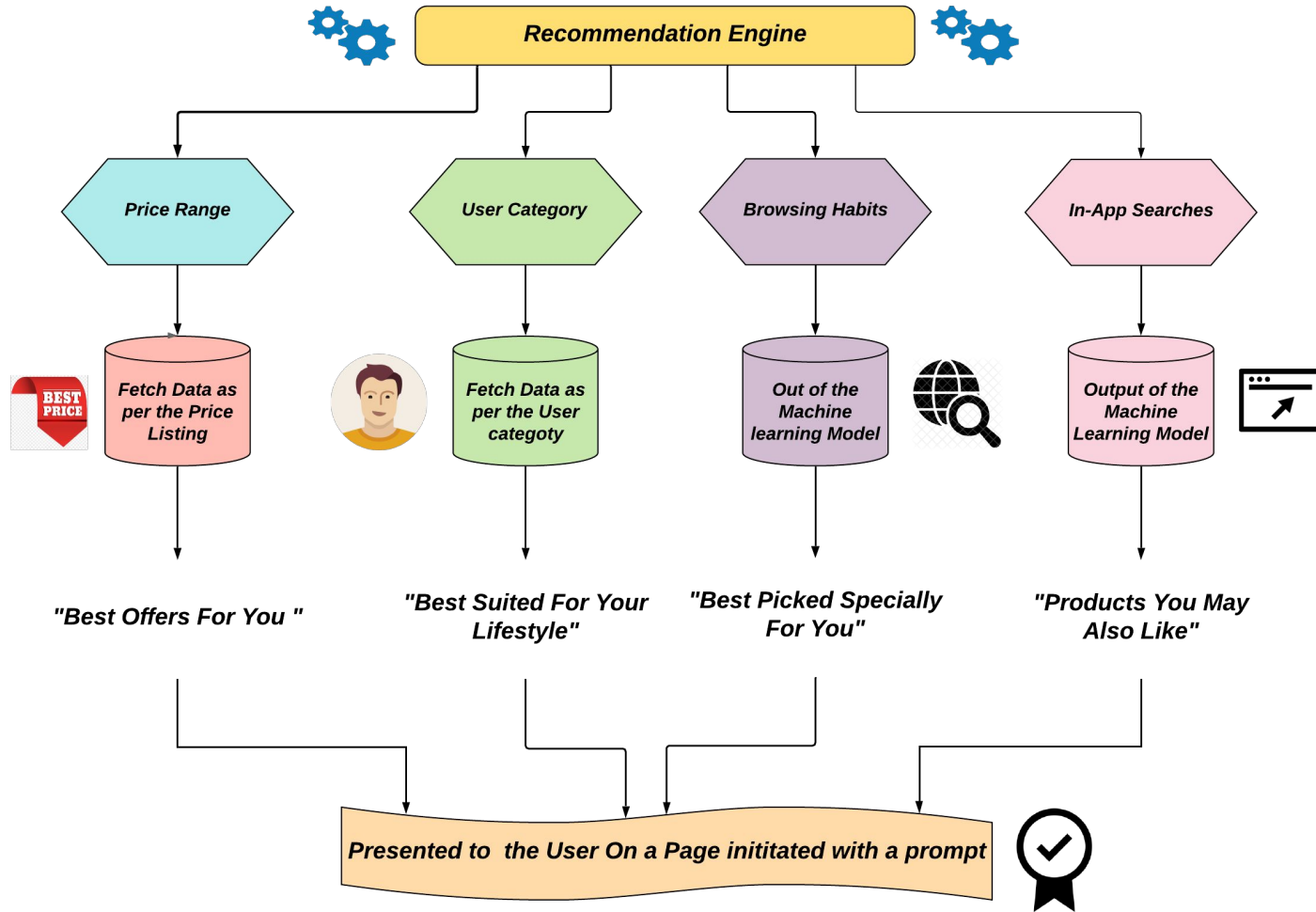
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```
{'Batteries': '1 Lithium Polymer batteries required. (included)',  
'Brand': 'Lenovo',  
'Colour': 'Platinum Gray',  
'Graphics Coprocessor': 'Integrated Graphics',  
'Hard Disk Technology': 'Mechanical Hard Drive',  
'Hard Drive Size': '1 TB',  
'Included Components': 'Laptop, Adapter and User Manual',  
'Item Height': '23 Millimeters',  
'Item Weight': '2.2 Kg',  
'Item Width': '26 Centimeters',  
'Item model number': '81D20090IN',  
'Lithium Battery Energy Content': '35 Watt Hours',  
'Maximum Display Resolution': '1920 x 1080 (Full HD)',  
'Memory Technology': 'DDR4',  
'Number of Audio-out Ports': '1',  
'Number of Ethernet Ports': '1',  
'Number of HDMI Ports': '1',  
'Number of Lithium Ion Cells': '2',  
'Number of Microphone Ports': '1',  
'Number of USB 3.0 Ports': '2',  
'Operating System': 'Windows 10',  
'Optical Drive Type': 'None',  
'Price': '30790.00',  
'Processor Brand': 'AMD',  
'Processor Type': 'R Series',  
'Product Dimensions': '37.8 x 26 x 2.3 cm',  
'RAM Size': '4 GB',  
'Screen Size': '15.6 Inches',  
'Series': 'Ideapad 330',  
'Speaker Description': 'Dolby Audio; 1.5W Dual speakers',  
'\xa0': '\xa0'}
```


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2	-0.425132	-0.478498	-0.489592	2.232023	-0.492751	-0.342031	-0.146986	-0.225374	-0.131977	-0.237451	0.403440	-0.305961	2.361389	-0.819584	-0.589368	-0
3	-0.425132	-0.478498	-0.489592	2.232023	-0.492751	-0.342031	-0.146986	-0.225374	-0.131977	-0.237451	0.403440	3.268387	-0.423480	-0.819584	-0.589368	-0
4	-0.425132	-0.478498	-0.489592	2.232023	-0.492751	-0.342031	-0.146986	4.437060	-0.131977	-0.237451	-2.478686	3.268387	-0.423480	-0.819584	-0.589368	-0

Using the Logistic Regression model :

'The Predicted Category Laptop is : '

array(['6'], dtype=object)

Using the Linear Discriminant Analysis model :

'The Predicted Category Laptop is : '

array(['12'], dtype='<U2')

Using the Decison Tree model :

'The Predicted Category Laptop is : '

array(['6'], dtype=object)

Using the Guassian Naive Bayes model :

'The Predicted Category Laptop is : '

array(['6'], dtype='<U2')

Using the SVM model :

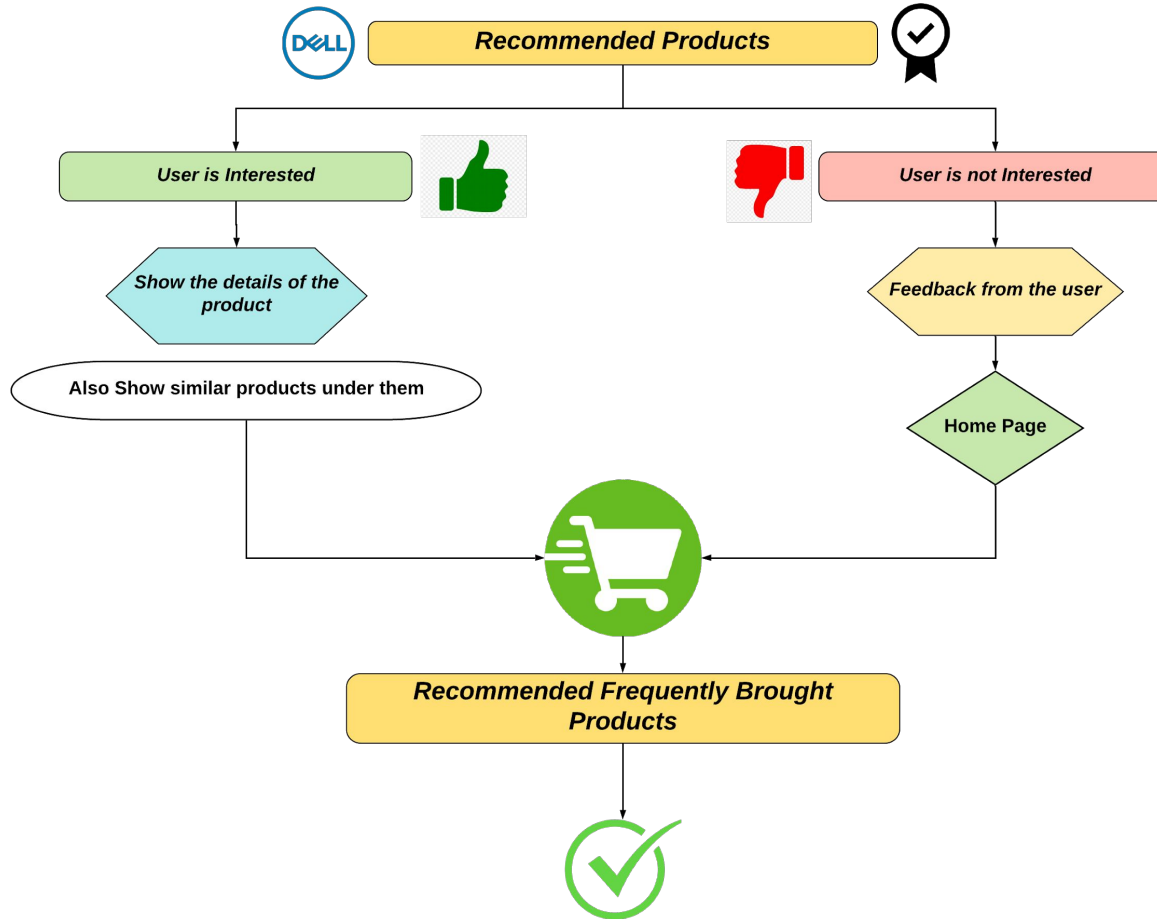
'The Predicted Category Laptop is : '

array(['6'], dtype=object)

RESULTS

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Demonstration

FUTURE SCOPE AND IMPROVEMENT

- Use of product tags for searches and result filtering.
- Email notifications for better deals and cart reminders.
- Recommendation of accessories along with the product based on the purchase history of customers.
- Interactive feedback and contact support using a chatbot.
- Geohashing for determining location of customer's IP address to estimate delivery time.

BUSINESS ASPECTS

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Dell and Microsoft pour millions into A.I. start-ups that are reshaping the workforce

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 **Lori Ioannou**
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iting for st.dynamicyield.com...



Personalised Experience



Increased
Conversion Rate



Increased Number
Of Cart Products

Thank You !!!