

User behaviour Analysis

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Introduction

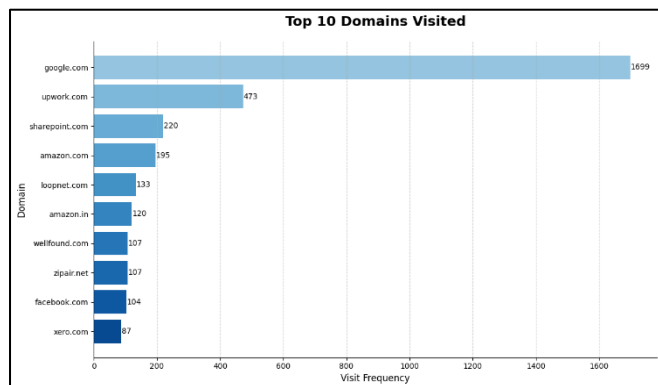
The task given is to explore key trends or patterns in given user browsing data. I have made a humble attempt to derive and discuss some of the key insight ideas which may impact business outcomes in a significant way. The approach I adopted here is in the way that preference given to bring up new (or may be used within your team as I see the brilliant eco system of PY group) ideas to see hidden details in between data points. The programming and debugging is also important but I believe ideas, new concepts and new methods matter in today's GPT world.

Methodology

Traditional Pipeline method is adopted here. Completely worked with VS code and Github as version control. The package is entirely built up on Python 3.12. The main.py file is branched form ETA (Extraction, Transformation and Analysis) pipeline. The data ingestion, cleaning and transformation is completely executed via pipeline and charts are generated in artifacts as output.

Observation

1. Most visited domains by user.

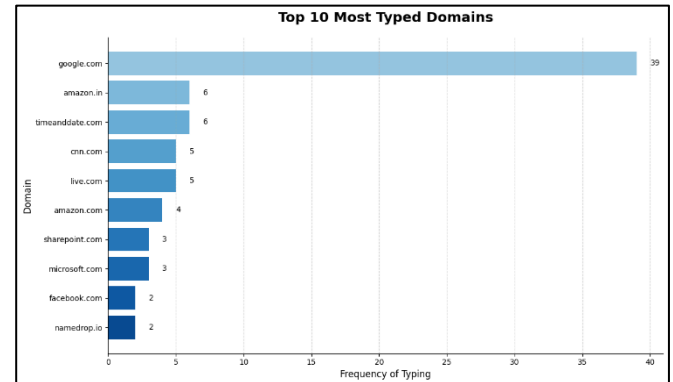


Here top websites are those having good potential of money transactions User have interest in online marketing and digital content delivery.

2. Most typed domains by user.

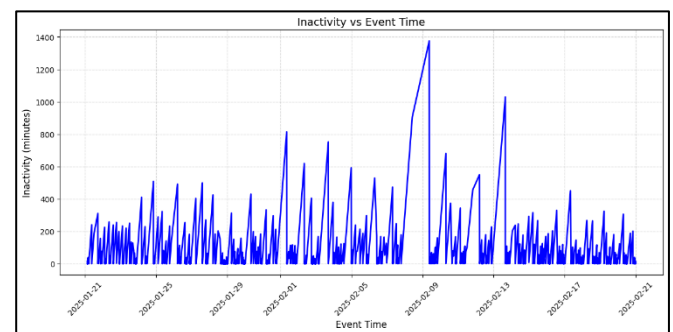
The effort to type and look for a particular web page have significant lead to give about user's interest and behaviour. The analysis done in this way brought up key insights,

User is highly interested in social connectivity and social affairs. The news, marketing domains popped up in top typed browsing.

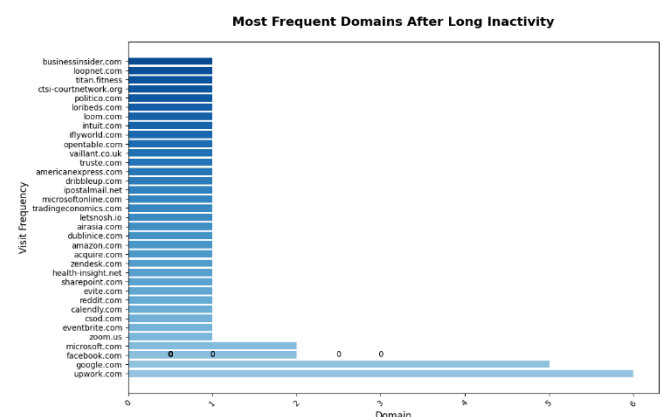


3. Inactivity patterns

Inactivity of user give good insights to study the overall connection of user to online pages and also we can evaluate time trend for individual websites. Here one line plot suggests that the inactivity peaks are getting shorter, suggests user is more getting into digital world and data transactions.



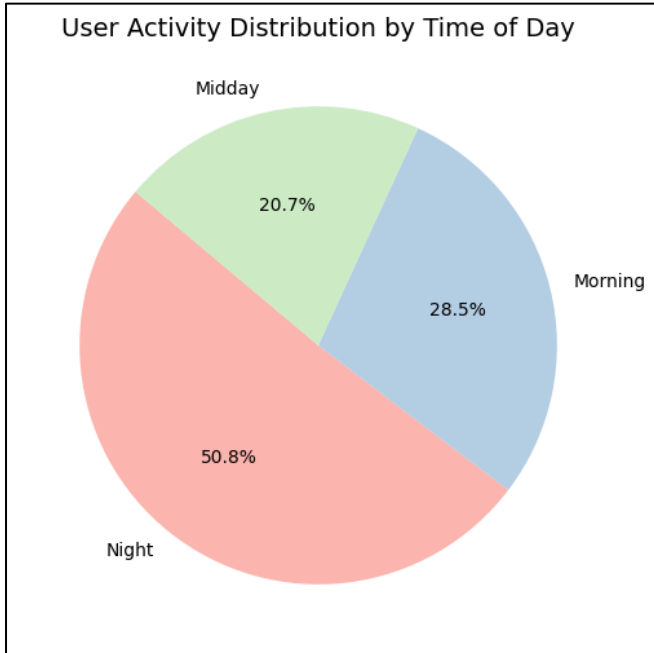
Also it is very important to look into which page the user is getting into first after a long duration of inactivity (may be more than 3 hours). This will give insights to strengthen user interest patterns derived. The figure below shows a horizontal bar chart again showing domains which user entered more after a period of inactivity. The first webpage usually suggests users' strong interest or prolonged intentions. This also suggest user is more in digital content marketing and social connectivity.



4. Most Active time of user

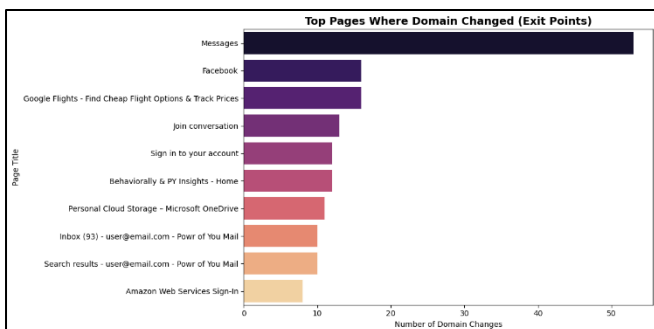
This is a popular insight we get from browsing data which enable any advertising service to kick them and play. Here is the pie chart which shows more than 50% user activity is happening at night time. This also give service provider an insight to chose time of website maintenance wisely.

He/She is a type of person who explore prices, markets and social connections but hesitates to proceed on full wavelength.



5. Top exit points in domains

Exit point means, the page where user leaves the website. This may happen if user is not interested to proceed further or he/she got what they want.



The chart shows that the user exits a domain block most likely when he/she enters a sign-up page, because he hesitates to proceed in sign up wall on websites. Other exit points like Messages and mails are exiting because of satisfactory information gain.

Conclusion

The user is a person who is earning or willing to earn through online content delivery.

He is more vulnerable to explore markets and digital transactions, but not already in it.