

Data Analytics Case Study: JustDice

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Company Overview:

JustDice is the European market leader of rewarded apps & games: Our products are enjoyed by more than 100 million players worldwide and we've distributed over \$40 million in cash & rewards to our users!

Business Model

- JustDice is what we refer to as a *publisher*.
- We produce games & apps, and advertise these in a number of different mediums (*networks*).
- When a user installs one of our products through those advertisements, the *network* responsible for bringing us that user charges us a fee.
- The fee charged by a network is an arbitrary value (*bid*) that we have full control of. In theory, higher fees would yield more, and better, users - which doesn't necessarily mean more profits.
- Users that downloaded our products are prompted to download and play *partner apps* to gain coins, which in turn, they can use to cashout money prizes.
- Whenever a user downloads any of those products, we also get paid a fee for acquiring a user for that *partner app*.
- That revenue generated by the user install varies, as it depends on a combination of 'user quality' and 'commercial conditions'.

Overview About Datasets

- **Ad Spend.csv**: Data about Advertisements details like event_date, country_id, network_id, value_usd
- **Installs.csv**: All about user's install activity we got from different country and networks in the year 2022.
- **Payouts.csv**: Users that downloaded our products are prompted to download and play partner apps to gain coins, which in turn, they can use to cashout money prizes.
- **Revenue.csv**: This data contains installs_id, event_date, value_usd

Key Insights from Ad Spend.csv

```
In [143]: ads_spend['value_usd'].describe()
```

```
Out[143]: count    11963.000000
mean      21.238483
std       65.157007
min       0.000000
25%      0.510000
50%      1.300000
75%      6.677500
max     1152.598013
Name: value_usd, dtype: float64
```

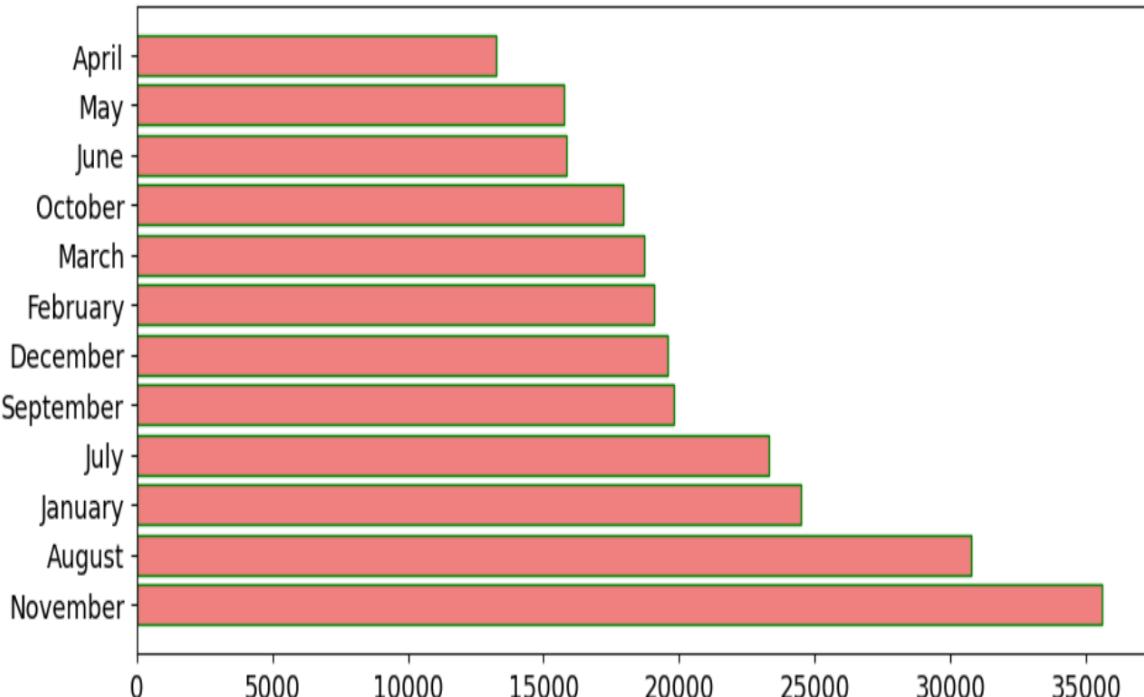
	country_id	value_usd
0	1	243186.687782
1	17	334.392000
2	109	10053.718011
3	213	501.178006

Statistical Analysis of an above output

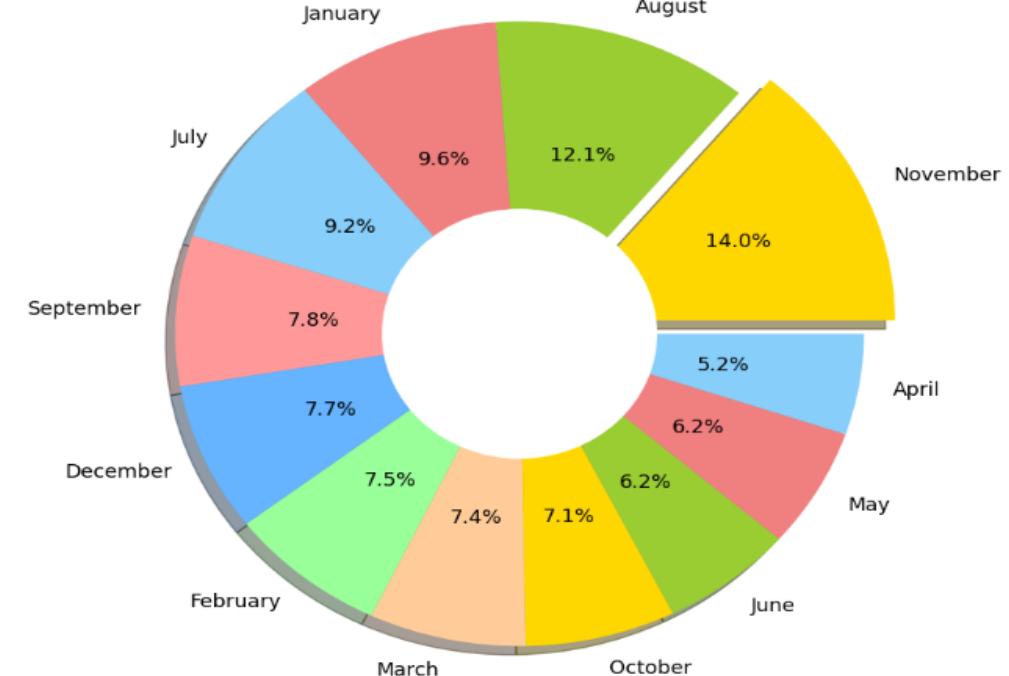
1. Max ad spend done in one time is 1152\$
2. 75% of ad spend usd value is under 6\$ (2022)
3. 21 \$ is an average value used for an ad spend in the year 2022.

1. maximum dollar has been spend on country id 1
2. minimum dollar has been spend on country id 17

Total ads spend value correspond to particular months(2022)



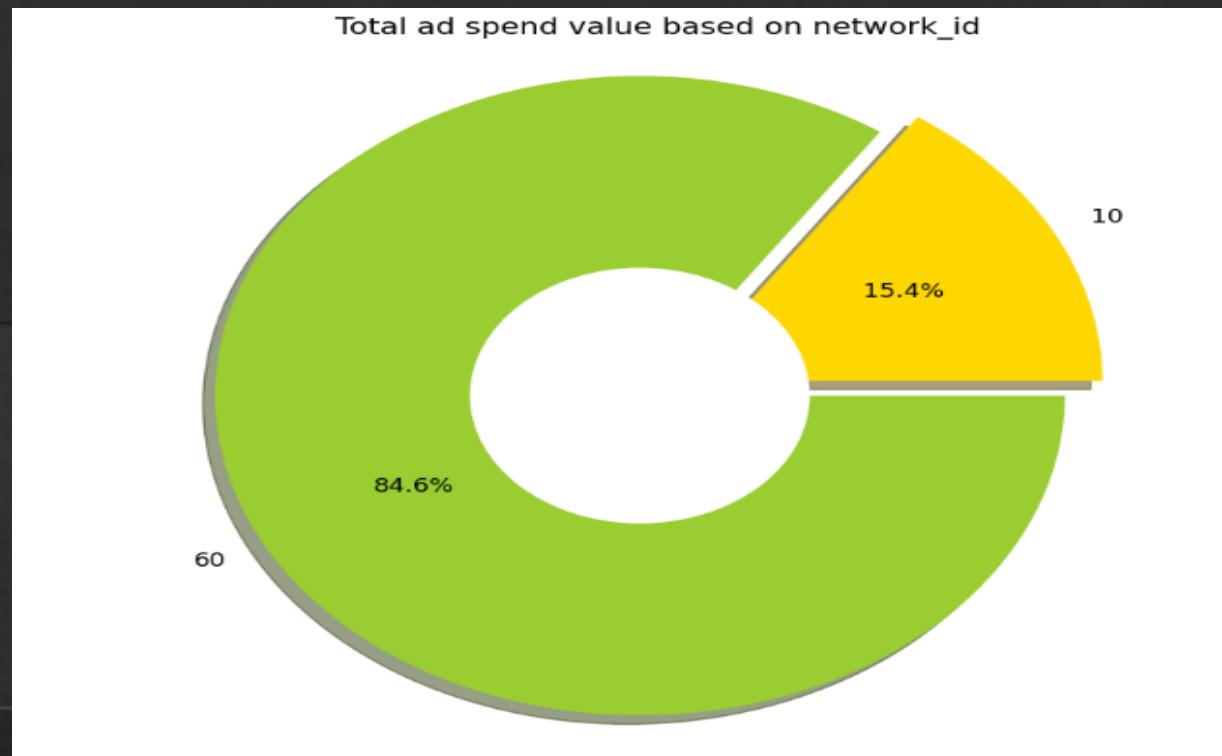
Total ads spend value correspond to particular months(2022)



Statistical Analysis of an above output

1. Top 3 months where the ad spend value is high is November followed by August and January

network_id	value_usd
0	10 39237.360885
1	60 214838.614914

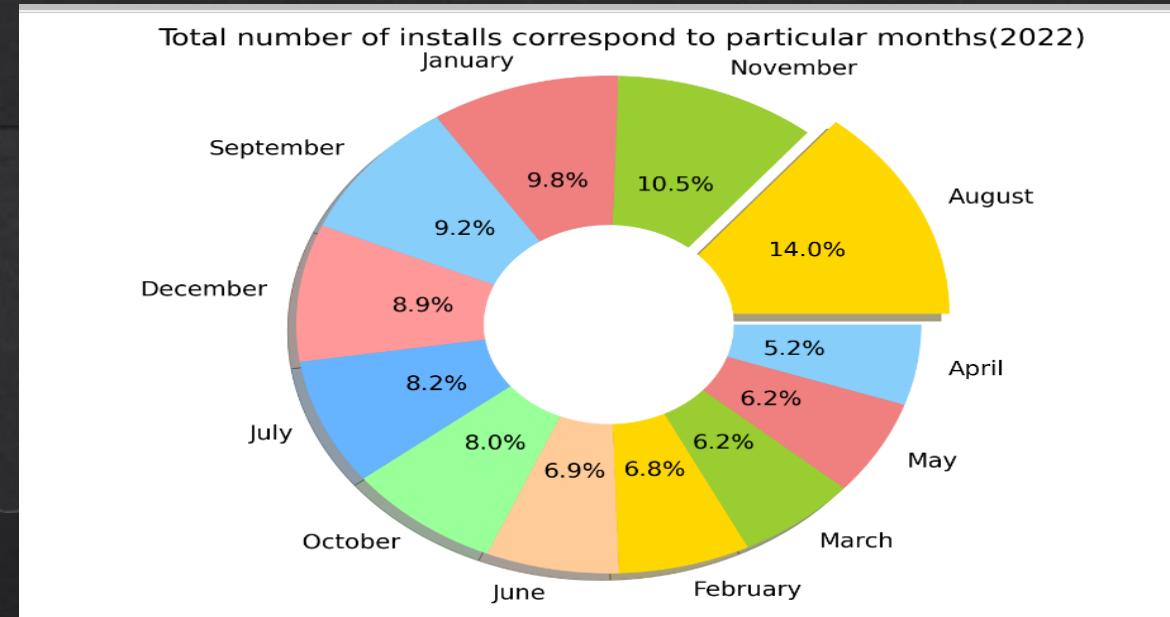
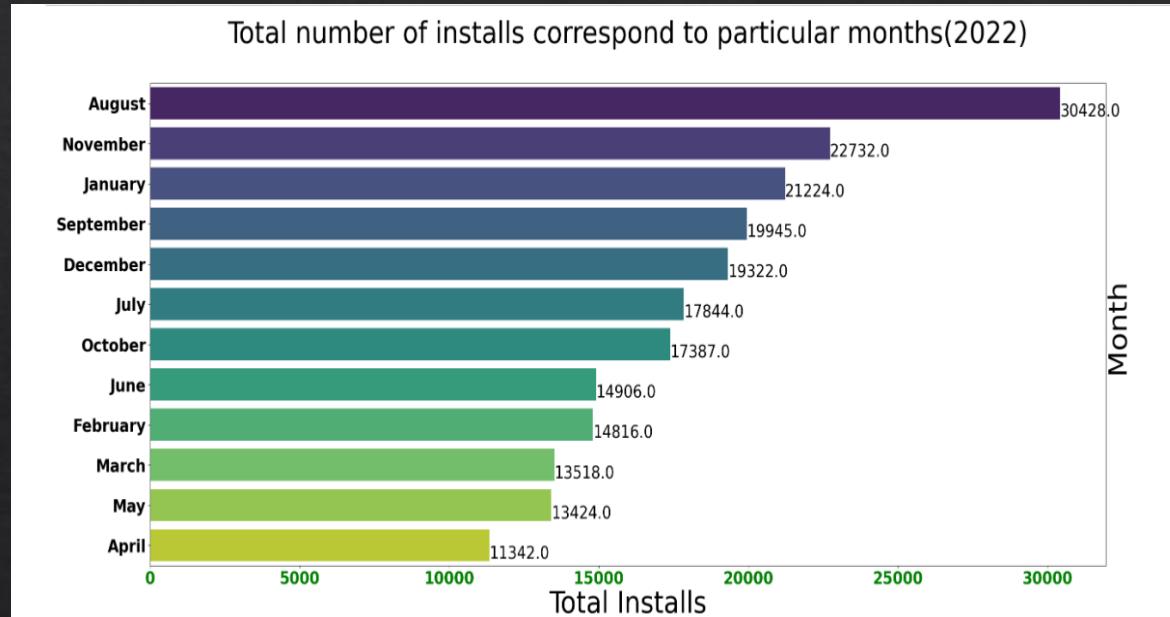


Statistical Analysis of an above output

1. maximum dollar has been spend on network id 60

Ads spend data will make more sense, once we will analyse installs data, as we can see is ad spend data is having correlation to installs data, are we getting new installs based on the amount we are spending on advertisement.

Key Insights from Installs.csv

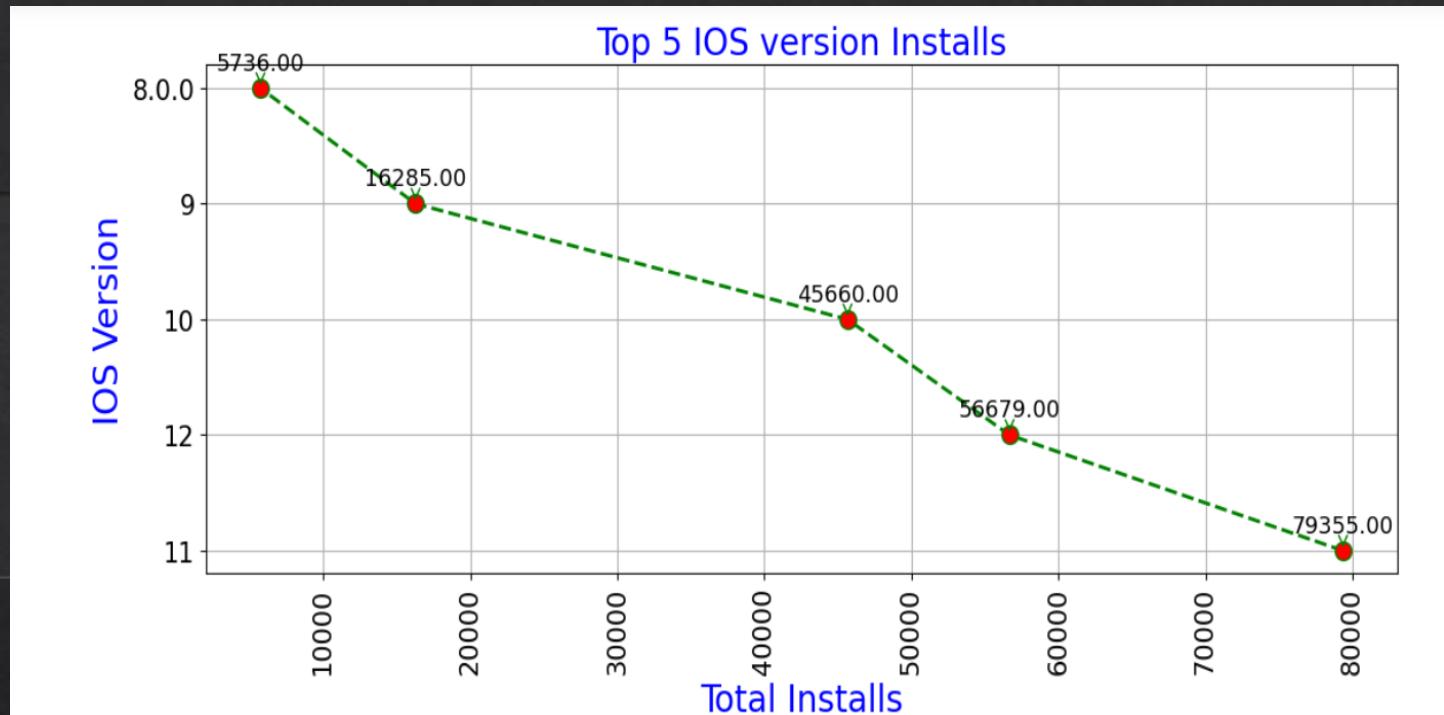


Statistical Analysis of an above output

1. Total Number of Installs in 2022 is: 216888
2. Top 3 months where installs number are very high:(August, November, January) which means our ad spend is correlated to installs as our top three months in ad spend are also same.

Key Insights from Installs.csv

device_os_version	Total Number of Installs
0	11
1	12
2	10
3	9
4	8.0.0

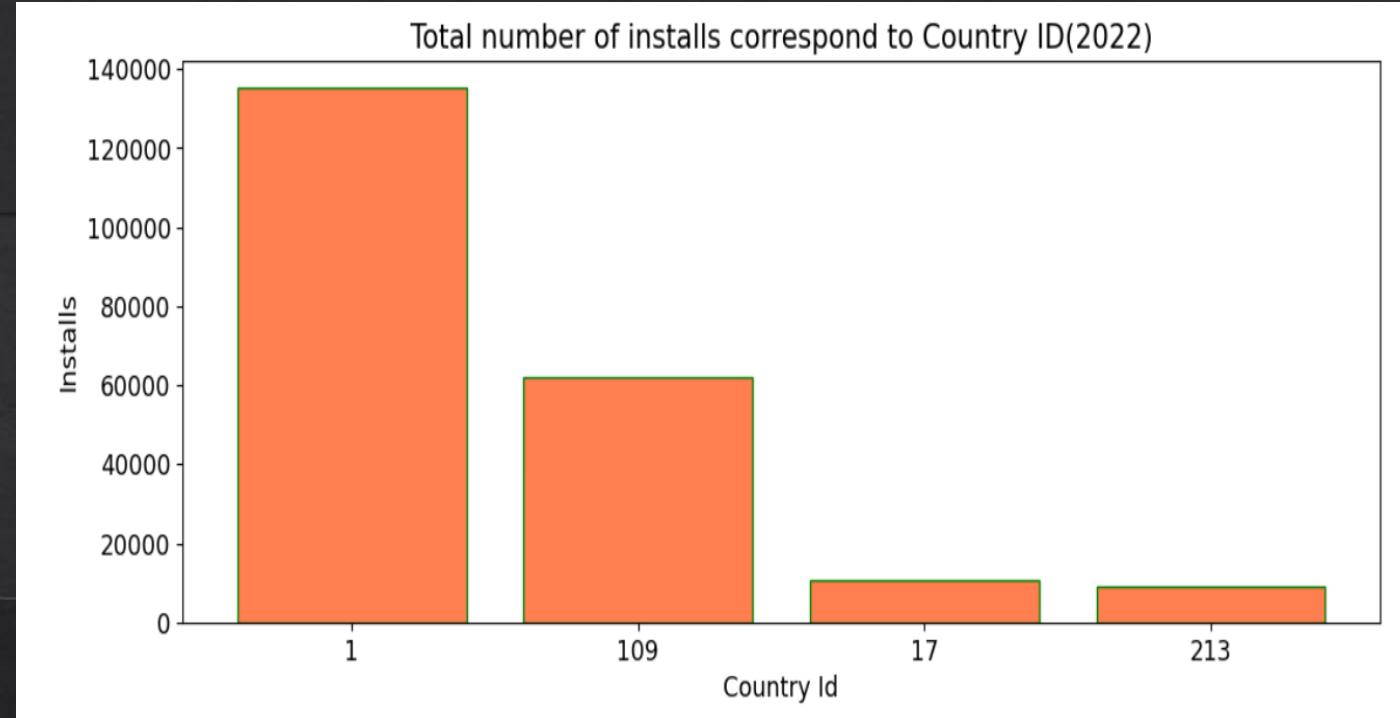


Statistical Analysis of an above output

1. Top 5 IOS version where number of installs are very high, so we can focus more on this version to build our next product or apps.
2. Version 11 is the best performing version out of all others.

Key Insights from Installs.csv

country_id	Total Number of Installs
0	135242
1	61841
2	10671
3	9134

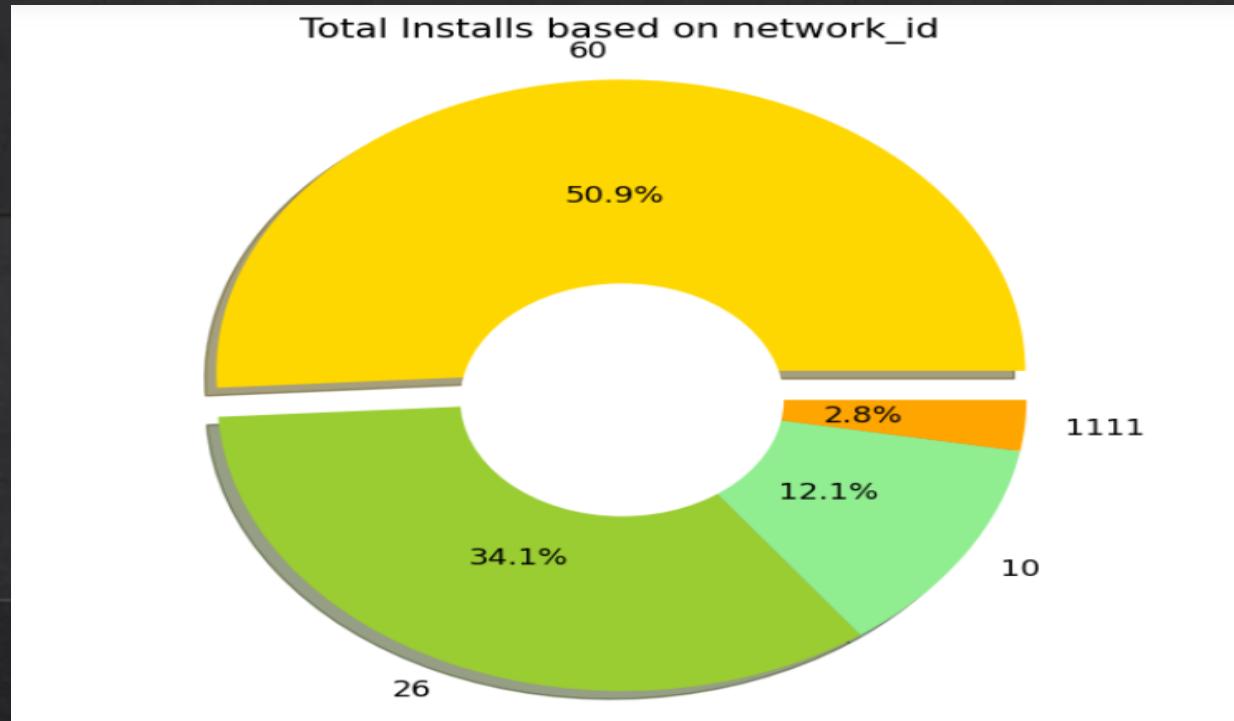


Statistical Analysis of an above output

1. Maximum dollar for advertisement has been spent on country id 1 and 109 from ads spend analysis, which correlates to maximum installs from the same country id.

Key Insights from Installs.csv

network_id	Total Number of Installs
0	60
1	26
2	10
3	1111



Statistical Analysis of an above output

1. The ad spend on network 60 is high compare to others network, that correlates to higher installs as well for network 60.

Key Insights from Payouts.csv

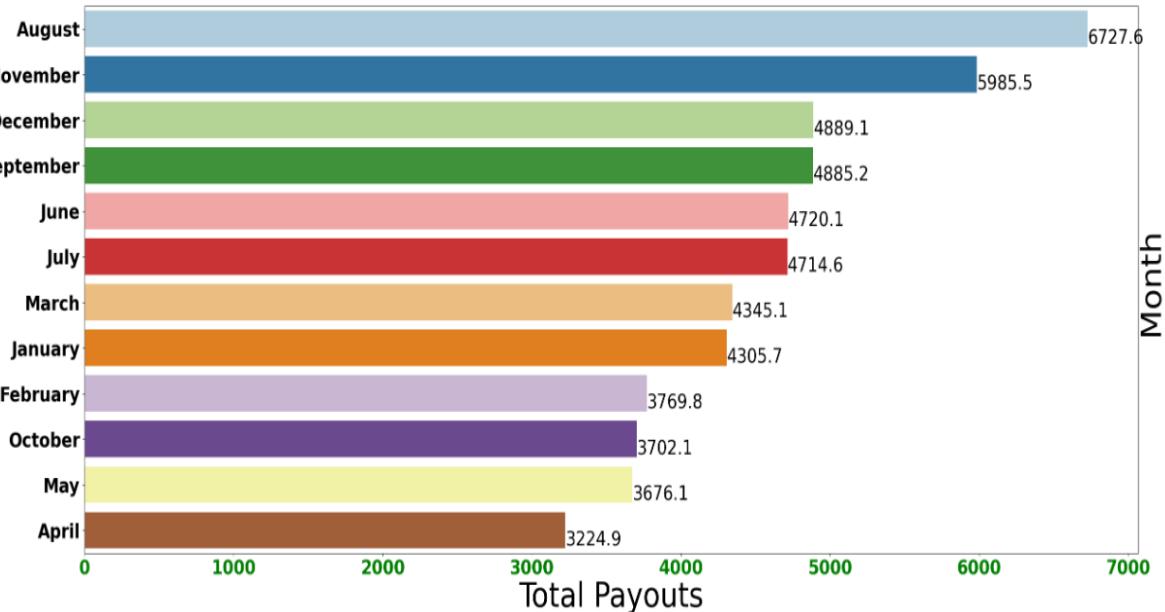
		install_id	value_usd
0	e3ecfd1ff2a32f0f25e889deaf360171786299974ceb398283340879cd7e94bf	72.898200	
1	a649ba9532390869692ef80b83e5fb16da142be59e60c3c5c06e8b89c54c8e4a	72.634050	
2	6d59123d2acd85d480e5366f15c632b32856b88478635fe0cd7fdad6b245eb5b	65.962381	
3	cb9144bea4080f68fe34e1dbb29475c3a03d9e2b0357466bec177042218bb4fd	62.534865	
4	597e354fd8ba50eca7a99571be901b62f91b6d2fbe99933636a977bfb5f9d4e2	59.359860	

Statistical Analysis of an above output

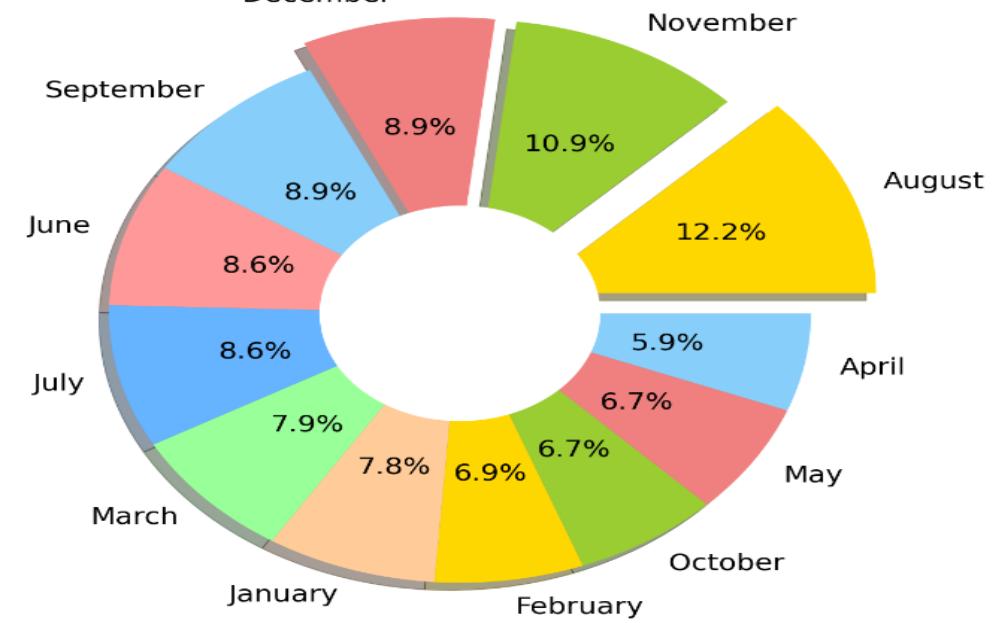
1. Top 5 Install Id with high payouts or cashouts, hypothetically they are the top Active users, on different partner app.

Key Insights from Payouts.csv

Total Payouts correspond to particular months(2022)



Total Payouts correspond to particular months(2022)



Statistical Analysis of an above output

1. Total Payouts in 2022 is: 54945.94\$
2. Top 3 months where payouts number are very high:(August, November, December).

Key Insights from Revenue.csv

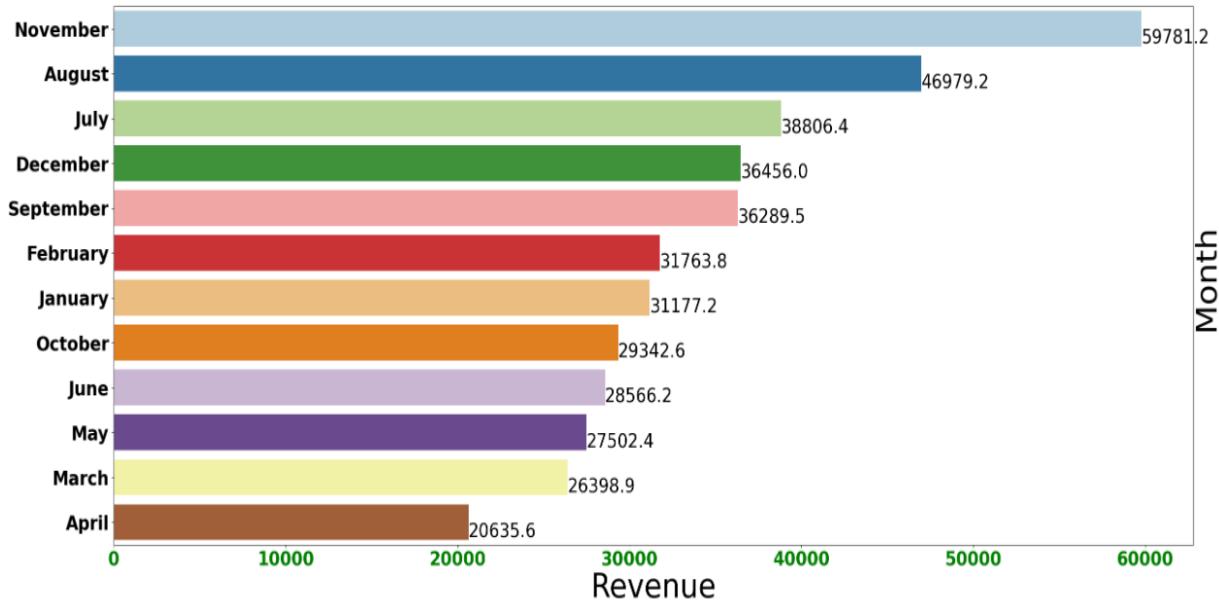
		install_id	value_usd
0	b18e32862277cef10fc4f9956671506a888ac19492a0adff6cdfe335ec34346e	133.430000	
1	3f885b64b8c190673d5c1ee17ffb881c934a6c5cf4c0792a246d66af47c75684	90.393146	
2	58386b3403601d1895438ef3fd38279e23db746540bee9a22cd0ee092977ac9b	86.049419	
3	c1aa5dda50f680762f24e1961191aee180e3940d4149de349fd96c1ec39187c8	84.560585	
4	b04f7c8bc33ef4e6acbbe05f0a2225ba936f50ce9f525d980d89f88274d5dd08	83.710000	

Statistical Analysis of an above output

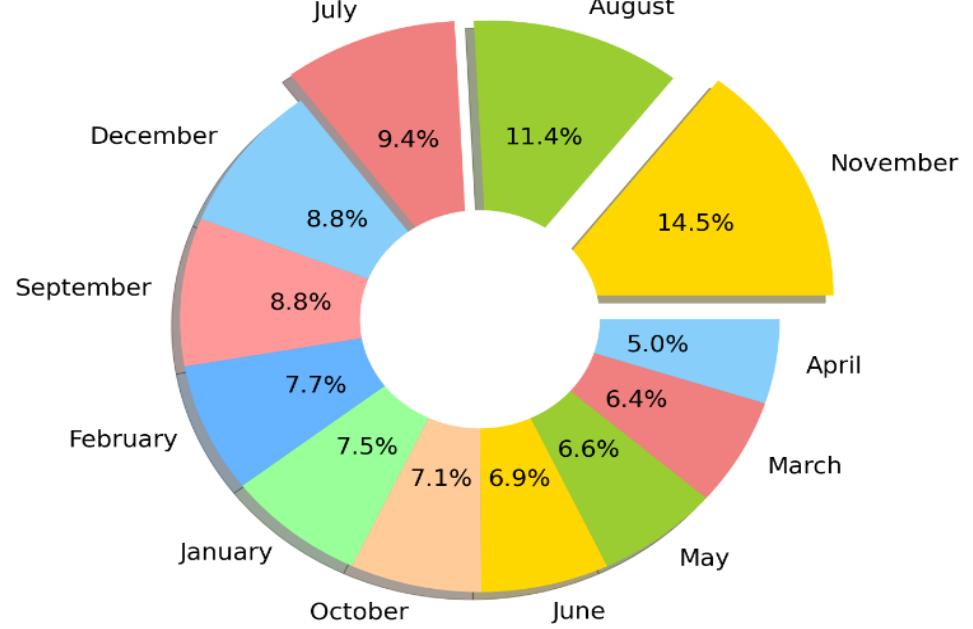
1. Top 5 Install Id with high Revenue, hypothetically or might be they are the one who had install more than one partnered app.

Key Insights from Revenue.csv

Total Revenue correspond to particular months(2022)



Total Revenue correspond to particular months(2022)



Statistical Analysis of an above output

1. Total Revenue in 2022 is: 413699.07\$, after removing duplicates value and negative revenue.
2. Top 3 months where payouts number are very high:(November, August ,July).

Conclusion

- Advertisement plays very important role. In getting new installs from different country id and network id, where the ad spend is high.
- November and August are best performing months in terms of “Revenue” ,”Payouts” and ”Total Installs”, we need to focus more on this months, like what unique we did in terms of marketing and advertisement, so that we can implement the same approach in other months.
- One suggestion, if we can track user’s details from there install_id, we can derive more deep insights, which can definitely help us to study the user’s performance and user’s changes.
- After analysing all the respective data as a data analyst, I need to do a whole lot of brainstorming meetings with marketing and advertisement team, to get more details about the type of advertisement, team is doing.
- We can say that JustDice has a good strategy because they focus on a wide range of the Country(population)
- If I will be a data analyst at JustDice, I will add some more parameters in revenue and payouts data like: country, screen_time_on _app and some more after having discussion with the JustDice Team .
- There should be one more KPI (Install Type) in installs data, which will tell us whether the install has been done organically or from advertisement(organic/advertise).



THANK YOU

