

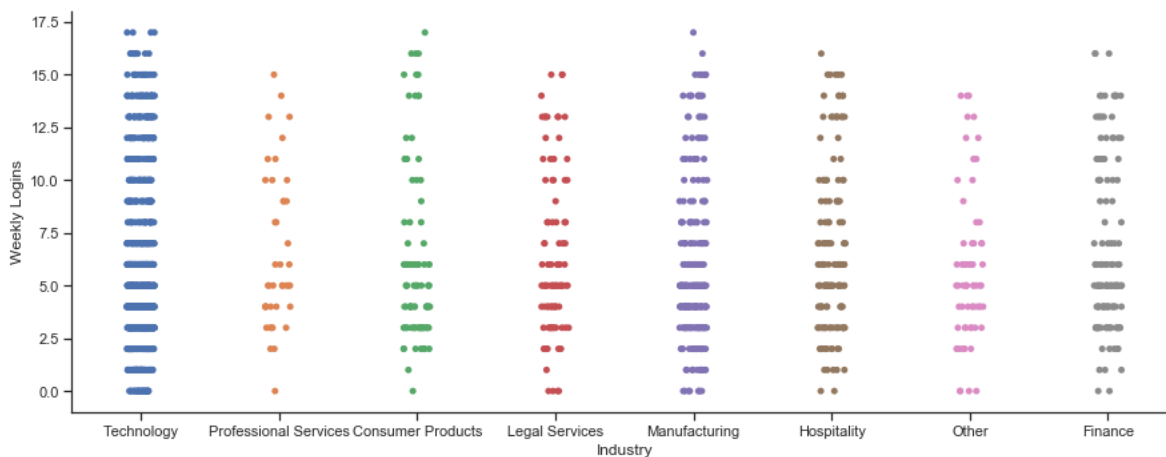
Data Analysis

- In the provided `weekly_logins` table you have activity on all the logins taking place
- The question that we are looking to answer is: what categories or groups here had high engagement (weekly logins) levels?
- Use whatever tools you need to answer this question, and please take this as an opportunity to display your analytical and technical skills
- Please elaborate on your reasoning for decisions made when analyzing the data set by providing your analysis

Solutions:

Python :

We first started with importing the data in python and understanding the shape and the structure of the dataset. We use a cat plot to visualize the logins with the industry types. We notice that the technology industry has the highest weekly logins.



Looking at the granularity of the data, technology integrations is a part which plays a major role on the weekly logins. Therefore, we go ahead and correlate the integrations of different technologies with the weekly logins by using correlation matrix of matplotlib and seaborn libraries. After doing this we notice that coefficients in the graph suggest that slack integration has quite the influence on the weekly logins as compared to the other integrations. All the other integrations i.e. Zendesk and salesforce has lower influence on the weekly logins while Gmail integration has least to negligible influence.

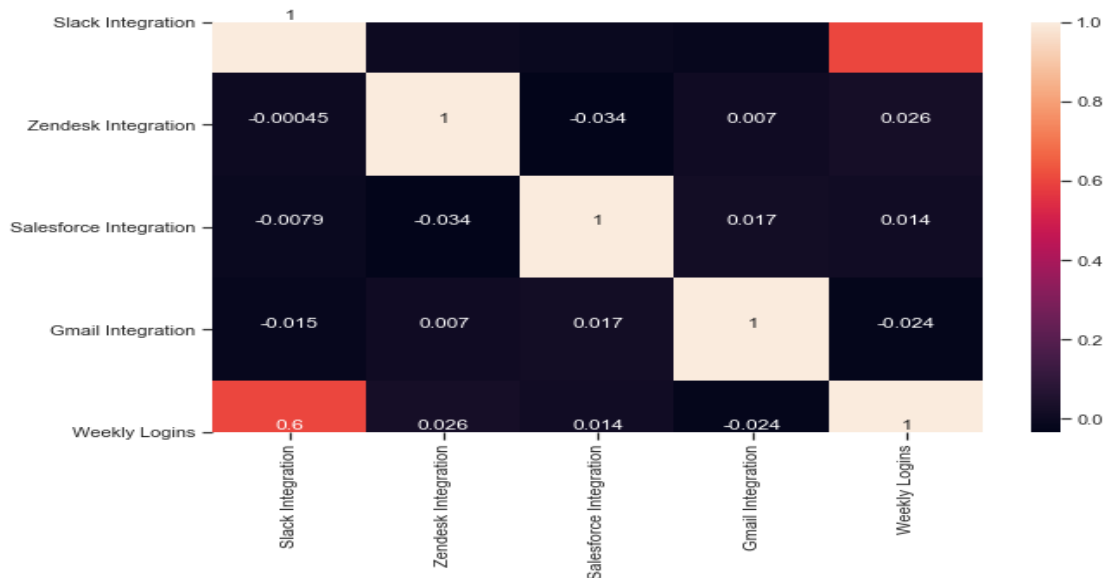
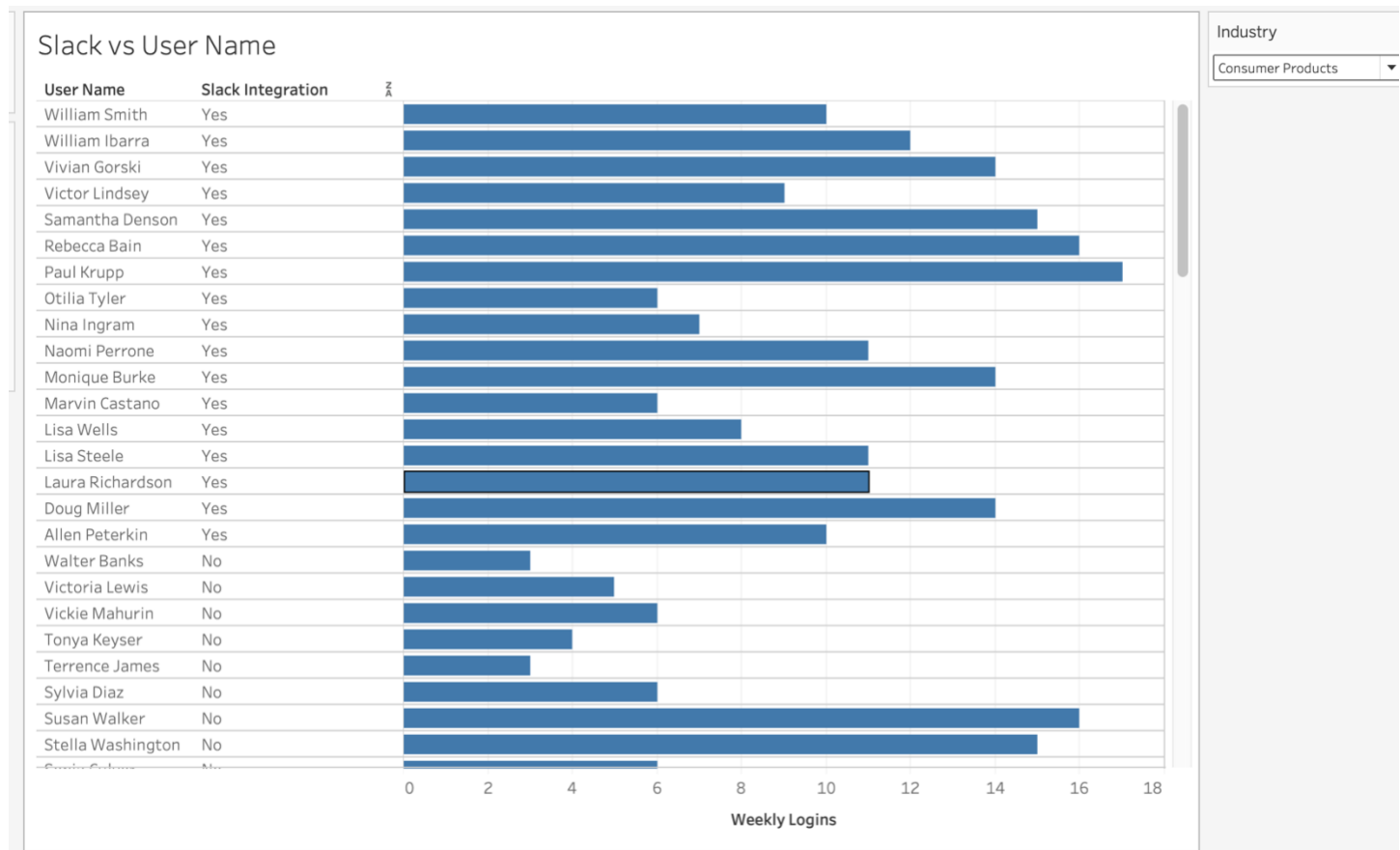


Tableau :

We further visualize this in tableau to understand why the group with slack integration has a higher influence on the weekly logins. We gather that users with slack integration have high weekly login rates as compared to people with no slack integration. We also gather that there was a larger population of people with no slack integration thus making the sum of the weekly login entries seem larger. We add a filter for industry type upon which we notice this trend occurring more in the technology industry as there are seemingly more entries and technological integration as well.

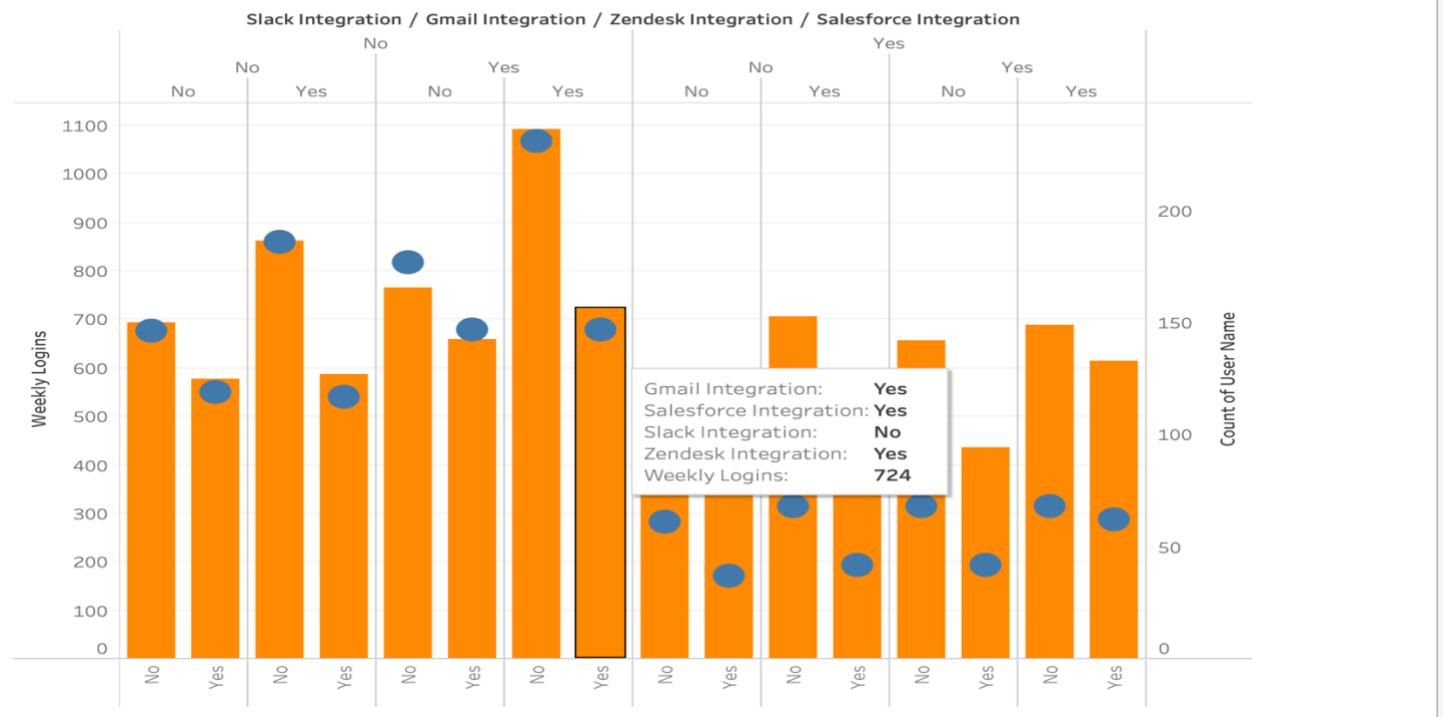
In fact, of all the industry types, industries with slack integration have higher weekly login values thus ensuring the assessment made by our correlation plot.



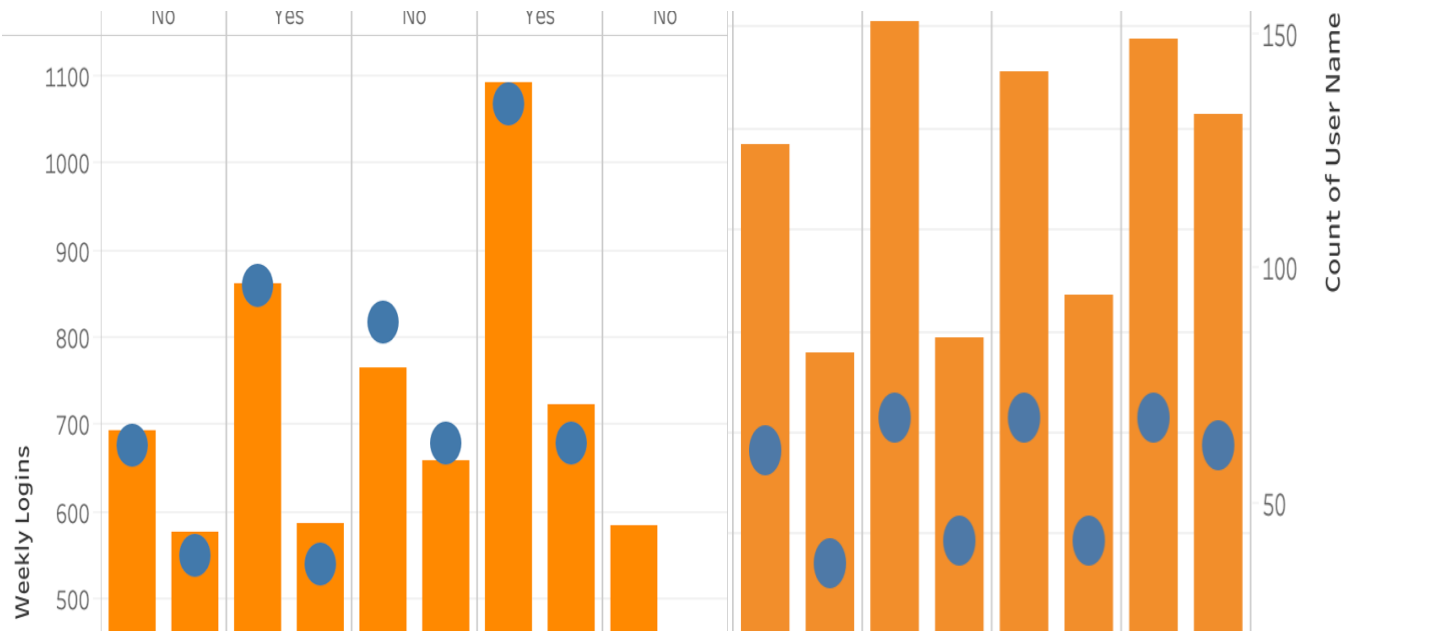
Next we also analyzed how these integrations and which combinations of these technological integrations seem to affect the weekly logins the most.

Upon this analysis we realize that companies with no integration and with all 4 integrations have approximately the same number of weekly logins. This graph also reinforces the finding we made in the previous visualization that groups which have all integrations have a high engagement level (weekly logins) even though the users are almost half that of users with no integration(which have lower user engagement levels). Our visualization also tells us that groups with Gmail and Zendesk integration have the highest engagement levels in the current dataset.

Integration

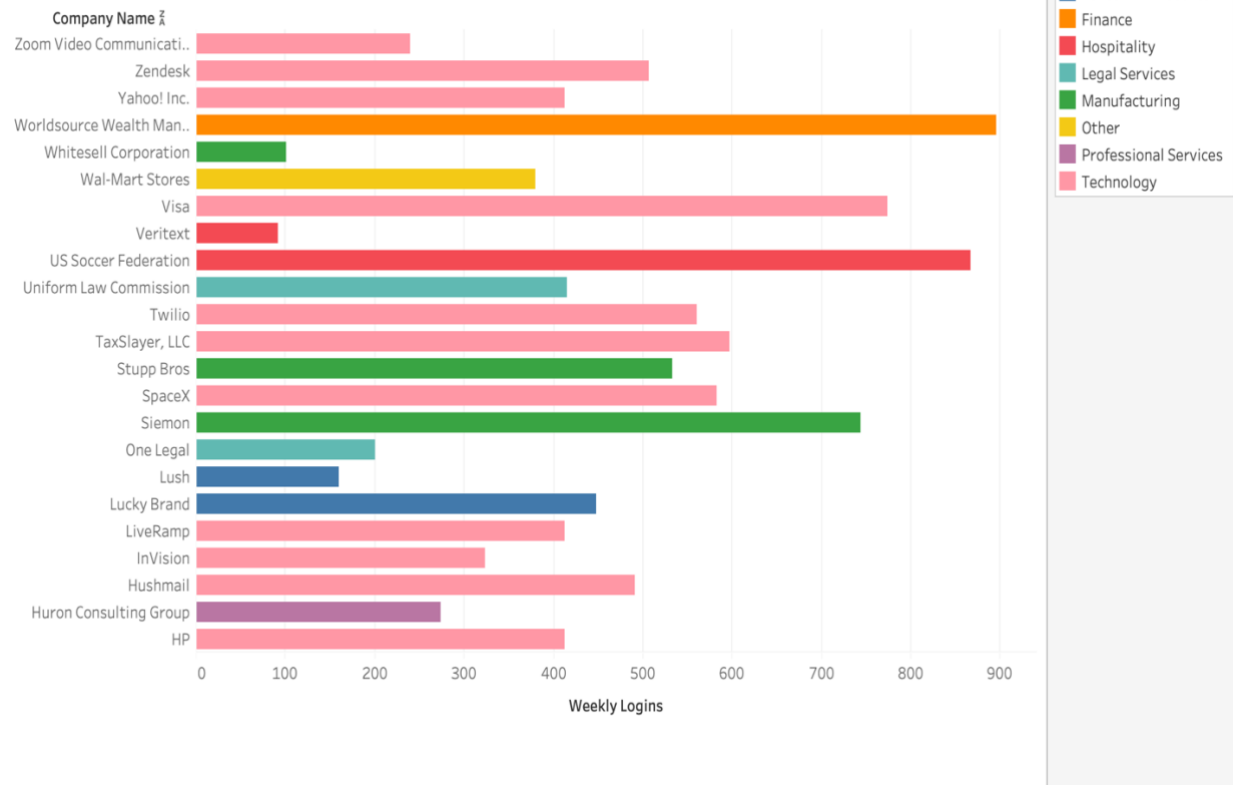


Another significant pattern that we get enforced with is the higher amount of engagement at lower user count. This happens due to the increasing tech integration (Slack, Gmail, Zendesk, Salesforce) of the users. We see the ratio increasing in a left to right pattern. (seen below and in attached twbx files)



In our next visualization, we also take company as our groups to understand weekly logins. We noticed that even though tech companies have combined higher weekly logins it is a finance company followed by a hospitality firm which has the highest weekly logins individually. World source and US soccer in this dataset give us the highest engagement level.

Company vs Weekly Logins



In our visualization for territory we understand that there is an overall increasing engagement level in the West US. We see maximum engagement from users in the west territory as these companies have their highest weekly login users in the west region as compared to east and west. Highest engagement levels were also noticed in the /tool/storyboard page for all the three regions.

Company Size

Company Size	Company Name	Industry	
\$500M - \$1B	Huron Consulting Group	Professional Services	274
	Zendesk	Technology	507
\$1B - \$10B	SpaceX	Technology	583
	Yahoo! Inc.	Technology	412
\$100M - \$500M	Hushmail	Technology	491
	InVision	Technology	324
	LiveRamp	Technology	413
	Lucky Brand	Consumer Products	448
	Lush	Consumer Products	160
	Siemon	Manufacturing	744
	Stupp Bros	Manufacturing	533
	Twilio	Technology	560
	Worldsource Wealth Man..	Finance	895
	Zoom Video Communicati..	Technology	239
>\$10B	HP	Technology	413
	Visa	Technology	774
<\$100M	Wal-Mart Stores	Other	380
	One Legal	Legal Services	200
	TaxSlayer, LLC	Technology	597
	Uniform Law Commission	Legal Services	415
	US Soccer Federation	Hospitality	867
	Veritext	Hospitality	91
	Whitesell Corporation	Manufacturing	101

Territory

	Territory		
Most Used Page	East	Midwest	West
/dashboard	60	81	114
/home	36	83	130
/login	61	85	88
/tool/build_query	76	58	119
/tool/search	61	107	129
/tool/storyboard	2,156	2,717	4,260

Also, when we visualize the company size with the , we notice that companies with sizes ranging from 100M – 500M have the highest logins. This may be due to the use of technology and manpower they have to belter facilitate the working of their products along with the referrals they put money into from different sites as seen from the dataset.

Insights Summarized:

1. Integration - Users with slack integration have high weekly login rates as compared to people with no slack integration.
2. Integration Combinations - The users to engagement ratio increase as the engagement increases due to increasing technology (slack, Gmail, Zendesk, salesforce – none to all) integration.
3. Industry & Company - Companies named World source and US soccer showed the highest engagement level. Tech industry had the highest logins in all.
4. Landing Pages - /tool/storyboard page created the highest engagement of all the other pages.
5. Territory - Maximum engagement i.e. weekly logins is in the west territory over the time frame from this dataset.
6. Company Size - Companies with sizes ranging from 100M – 500M have the highest logins.