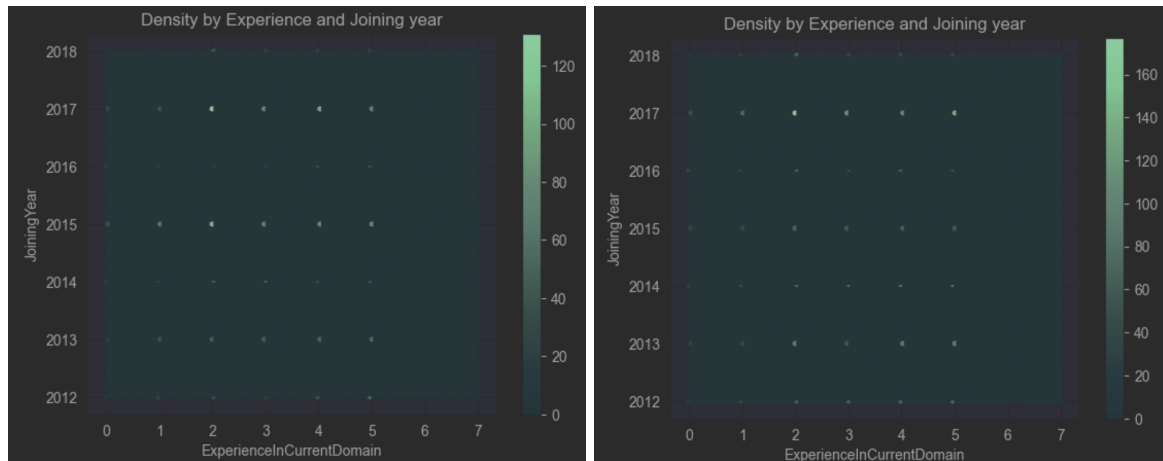


Homework 3 Visualizations

Megan Stinefield and Hannah Johnston

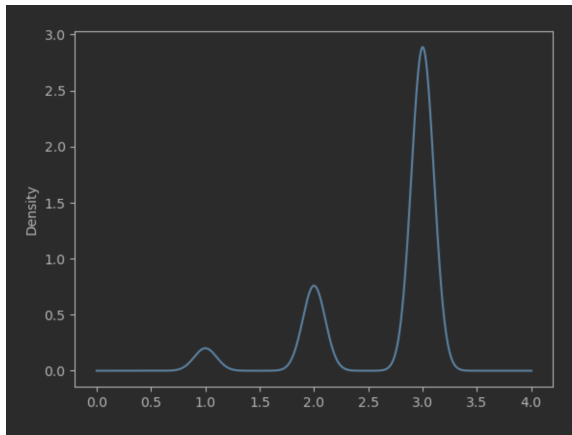
We picked a new dataset for this homework assignment about employees for a company. This data set contains a number of numeric fields such as joiningYear(2012-2018), PaymentTier(1-3), Age(22 - 41), Experience(0-7), and leaveOrNot (0-1). This data set also had non numerical categories such as education, City, Gender, and everBenched(yes or no). This was an interesting data set to try and visualize because of how the different data relates to each other.

Education	JoiningYear	City	PaymentTier	Age	Gender	EverBenched	ExperienceInCurrentDomain	LeaveOrNot
Bachelors	2018	Pune	3	32	Male	Yes	5	1
Bachelors	2018	Bangalore	3	26	Male	No	4	1
Bachelors	2018	New Delhi	2	34	Female	No	0	1
Bachelors	2018	Bangalore	3	40	Male	No	1	1
Bachelors	2018	Bangalore	3	23	Female	No	1	1



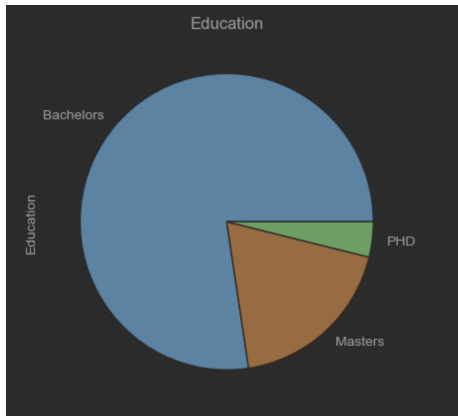
These graphs show the female(left) to male(right) visualizations of experience vs the year that they joined. You can pull a number of conclusions from these 2 graphs. One of the first ones mainly notable is the higher number of data points on top of the 2017 year on both graphs. This company has hired a number of new employees all across the board with experience levels. You can notice on the right graph(male) that the brighter the color, the closer it is to 160, while the left graph of women is 120, meaning that there are more male employees the brighter the color.. We can also see that it also had a push to hire more women in 2015 as seen on the left depiction.

Bachelors	2018	Bangalore	3	28	Male	Yes	3	1
PHD	2018	New Delhi	3	25	Male	No	3	1
Bachelors	2018	Bangalore	3	28	Male	No	1	1
Masters	2018	New Delhi	1	24	Male	Yes	2	1
Masters	2018	New Delhi	3	28	Male	Yes	2	1
Bachelors	2018	Pune	3	25	Male	No	3	1



Here we can see the overall pay grade density. We can easily see and interpret this visualization. We can tell that the majority of employees are in pay grade 3 and very few are in paygrade one. Another visual that we could implement would be the differences in the overall experience level and education. Then we could draw more conclusions on if higher education or experience will mean a higher pay grade.

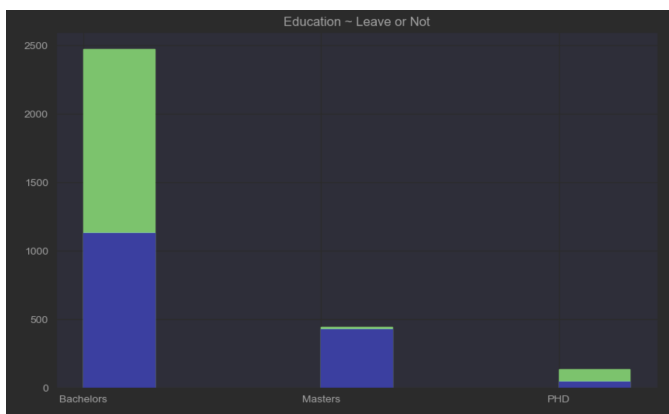
Bachelors	2018	Bangalore	3	25	Male	No	3	1
Bachelors	2018	Bangalore	3	26	Male	No	4	1
Bachelors	2018	Bangalore	3	27	Male	Yes	5	1
Bachelors	2018	New Delhi	3	25	Female	No	3	1
PHD	2018	New Delhi	3	24	Female	No	2	1
Bachelors	2018	Bangalore	3	25	Male	Yes	3	1



This next visualization is a pie chart of the distribution of the educations of all of the employees. This will make it so clear the full weights of each degree level. Clearly we can see that over 75% of these employees have only a bachelors, around 20% have their masters, and only around 5% have their PhD. This can be great for the company to see who they might want to hire in the future.

Bachelors	2018	Pune	3	28	Male	No	2	1
Masters	2018	New Delhi	3	24	Male	No	2	1
Bachelors	2018	Bangalore	3	24	Female	No	2	1
Bachelors	2018	Bangalore	3	25	Female	No	3	1
Bachelors	2018	Bangalore	3	26	Male	No	4	1
Masters	2018	New Delhi	3	25	Female	No	3	1

This next graph is a total box plot with the overall age distributions of the employees in this company. As we can see the range is from ages 22 to 41, with the average being 27, and the majority being around that age. I think this could be very helpful for the company to see so that they can work with and appeal to their age group majority.



This last is a bar graph based on employees leave rate and what their education level is. The green is who stayed working at the company, and the blue shows who left.

Here it is a great way to show where the biggest turn over is and might help this company target improvements in certain areas or departments.

Masters	2018	Bangalore	3	39	Male	No	3	1
Bachelors	2018	Bangalore	3	36	Male	No	1	1
Masters	2018	New Delhi	3	41	Male	No	2	1
Masters	2018	New Delhi	3	40	Male	No	2	1
Bachelors	2018	New Delhi	3	39	Female	Yes	0	1
Bachelors	2018	Bangalore	3	36	Male	No	3	1