

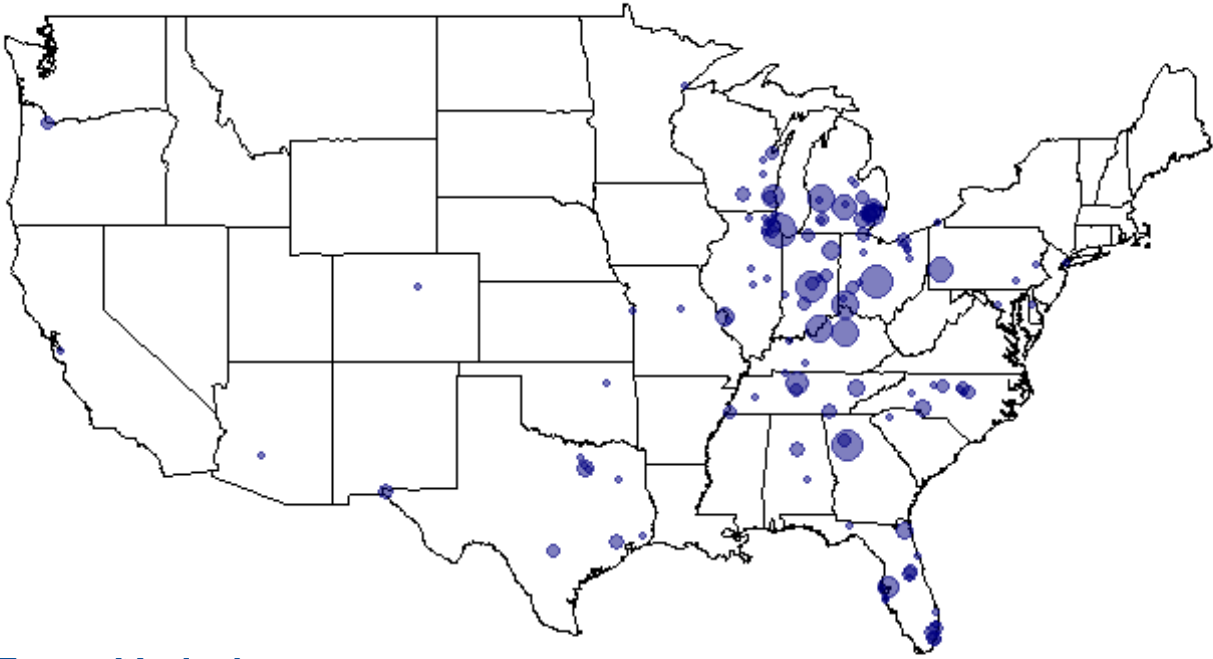
ABSTRACT

This project deals with various visualization techniques applied to a dataset to make it easy to draw conclusions about the data by looking at the plots. This project aims to explore information about Service Express (SEI)'s services, their customers and equipment they maintain. The SEI data consist of six different datasets that are linked together by various variables such as unique keys and item numbers. Finding the right questions and significant variables are important to unveil hidden information in this project. The results show that SEI have strong customer relations in the Midwest region. The challenging part of this project is the cleaning and exploring insights with little to no additional information about the company.

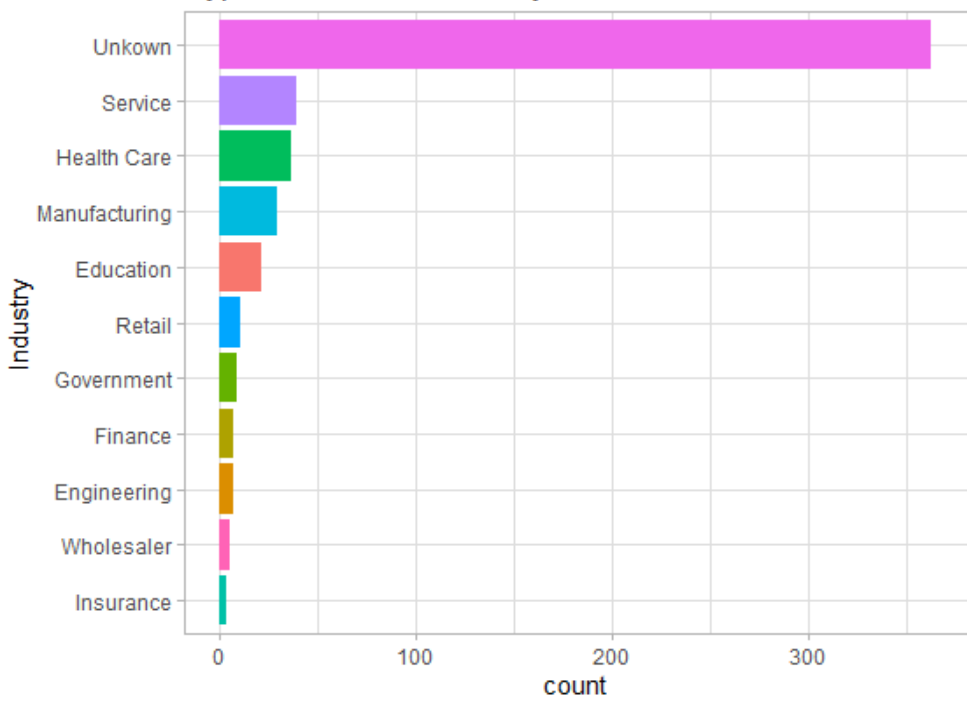
CUSTOMER INFORMATION

529 Customers in 30 states

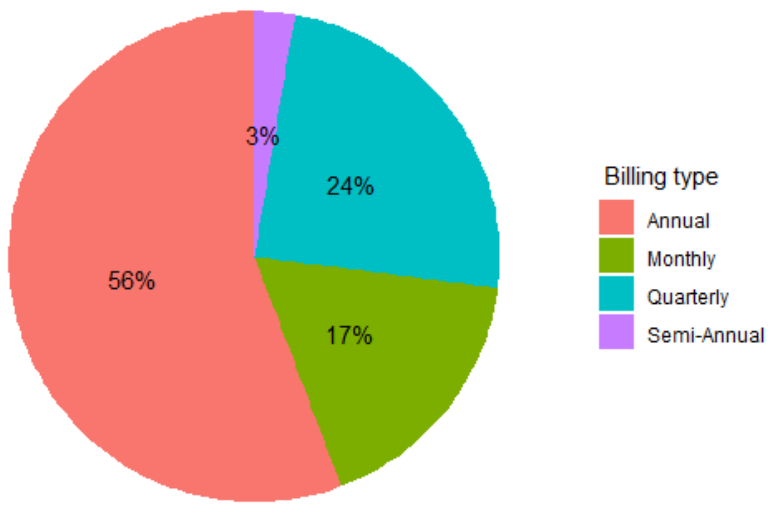
i. Customer Headquarter map



ii. Type of industry



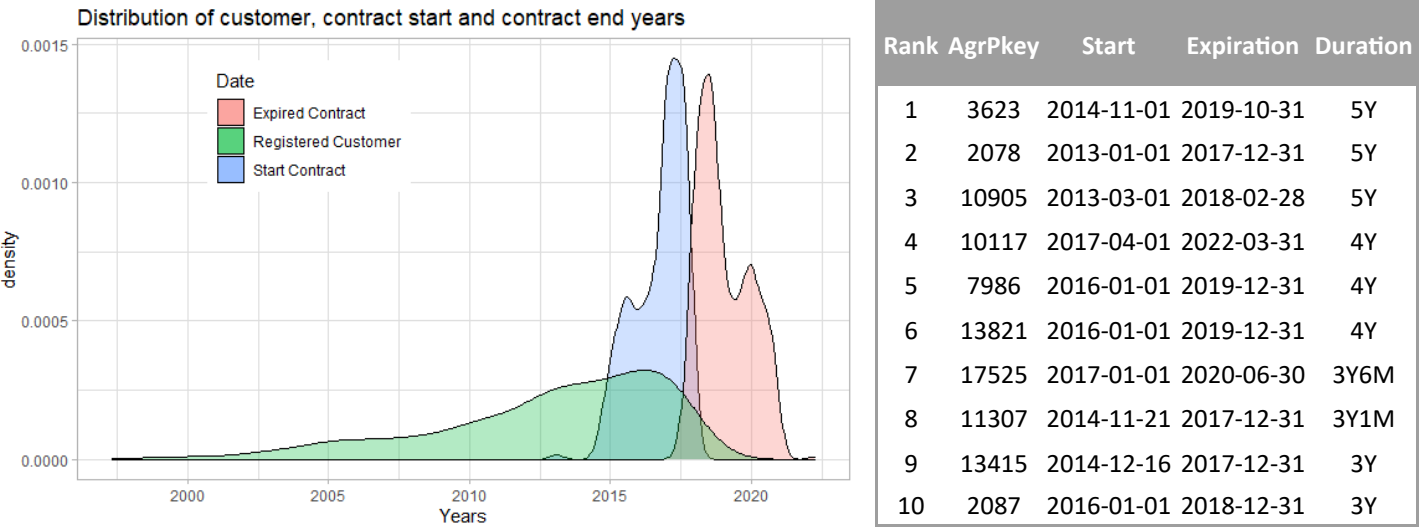
iii. Type of bills



Various billing type mostly used by the customers chart shows that the annually billing is the most preferred billing option. SEI may target monthly customer by giving promotion to upgrade from monthly to annually billing.

iv. Contract duration

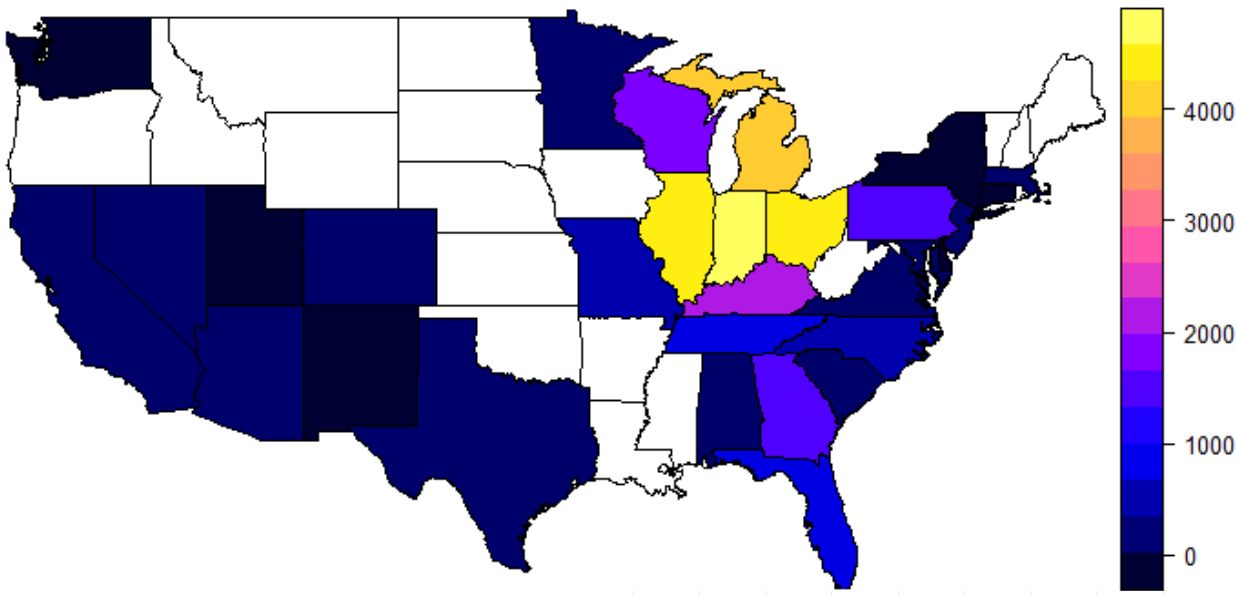
The longest contract is 5 years and the shortest contract is 3 months. Most of the contracts started around 2016 to 2018.



SEI SERVICES

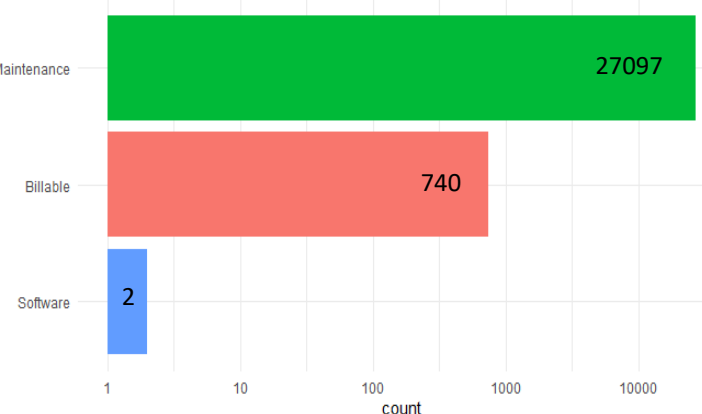
27839 ticket Services in 33 States and Aboard

i. Heatmap of service events through the United State



ii. Type of Service Event

The major service that SEI provided is maintenance at 97%. Billable and software service are very little compared to maintenance.

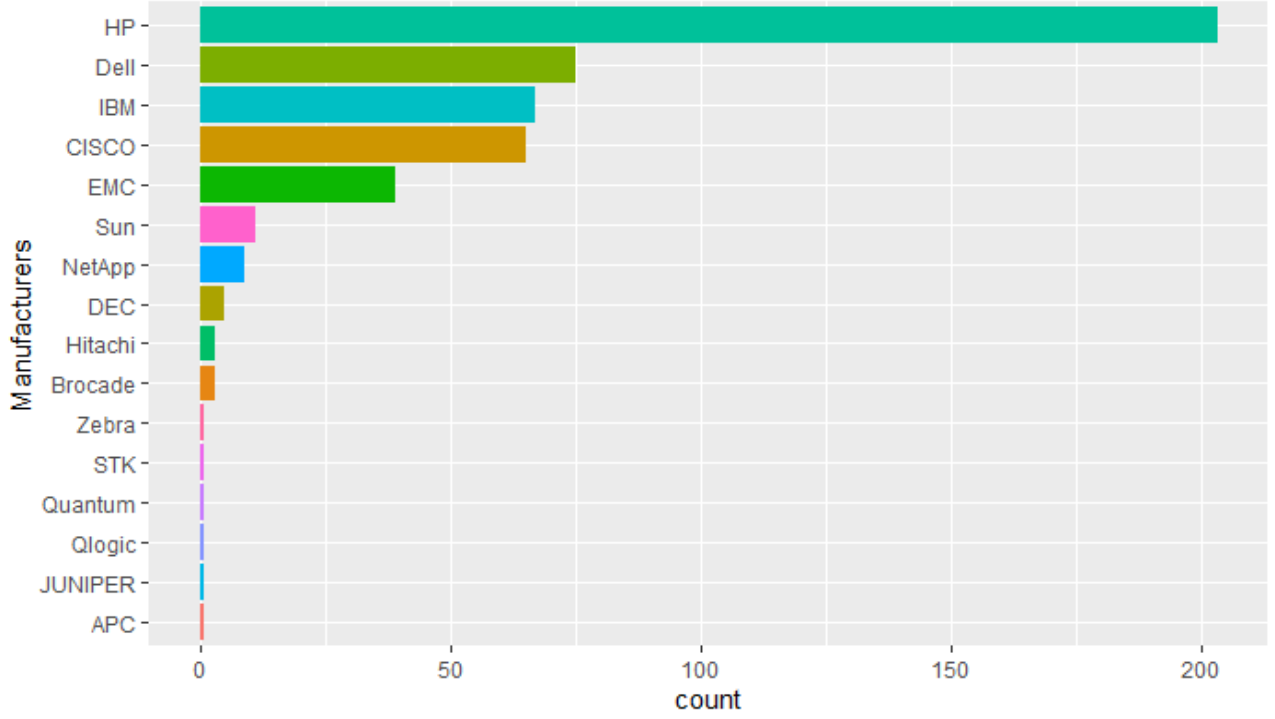


iii. Services rendered and their cost



EQUIPMENT MAINTENANCE

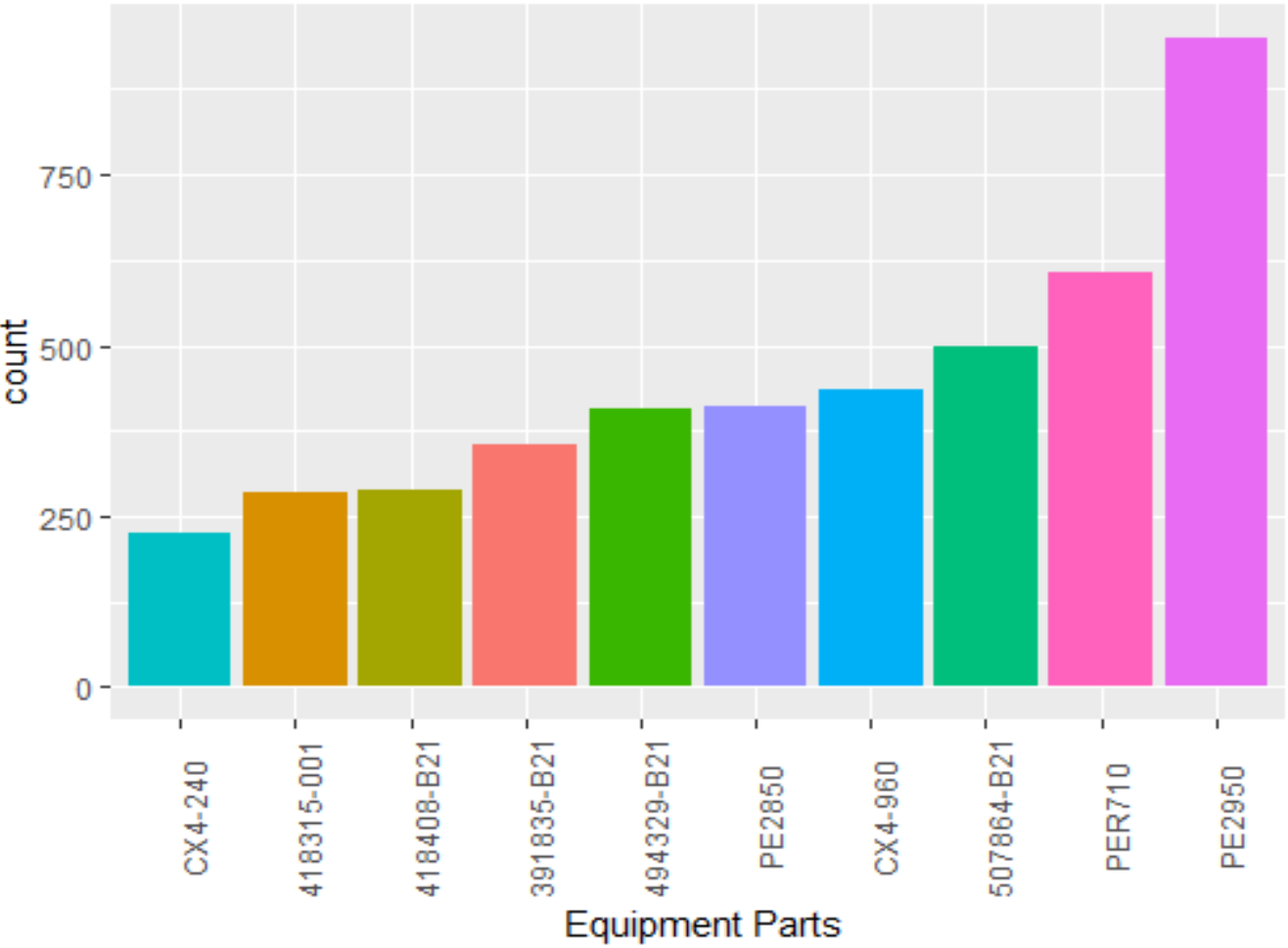
i. Manufacturing companies



ii. Equipment cost by company

Rank	AgrPKey	Total Cost (\$)	Count	Customer Since Date	Contract Start Date	Duration	Invoice Frequency	HQ State	Industry
1	8337	78960	24	2010-06-01	2016-06-01	5Y	Quarterly	IL	Service
2	3862	50347	1829	2005-04-01	2017-04-01	5Y	Monthly	MI	Manufacturing
3	8011	50234	3068	2010-05-01	2016-05-01	5Y	Quarterly	IL	Wholesaler
4	13936	47550	634	2015-05-01	2015-05-01	4Y	Annual	NC	Unkown
5	3645	47468	838	2004-10-01	2016-09-01	4Y	Monthly	IL	Education
6	16500	46916	634	2016-09-01	2017-09-01	4Y	Monthly	FL	Unkown
7	5461	41882	974	2007-03-01	2016-07-01	3Y6M	Quarterly	OH	Health Care
8	8884	41882	1113	2011-01-01	2017-01-01	3Y1M	Annual	KY	Health Care
9	14273	39308	634	2015-08-04	2015-08-04	3Y	Annual	TN	Unkown
10	3764	38040	708	2005-01-01	2017-01-01	3Y	Quarterly	IL	Finance

iii. Top 10 equipment parts used



Conclusion

This project is to make exploratory analysis about customer information, SEI service and their equipment maintenance. This project reveals details of SEI services and some of the major objectives of the SEI services is revenue growth, and excellent customer service. SEI could attract more customers in new areas and new industries, and monitor the cost of maintenance and parts. Moreover, SEI could use these insights to plan its business strategy, and the company growth and development.