

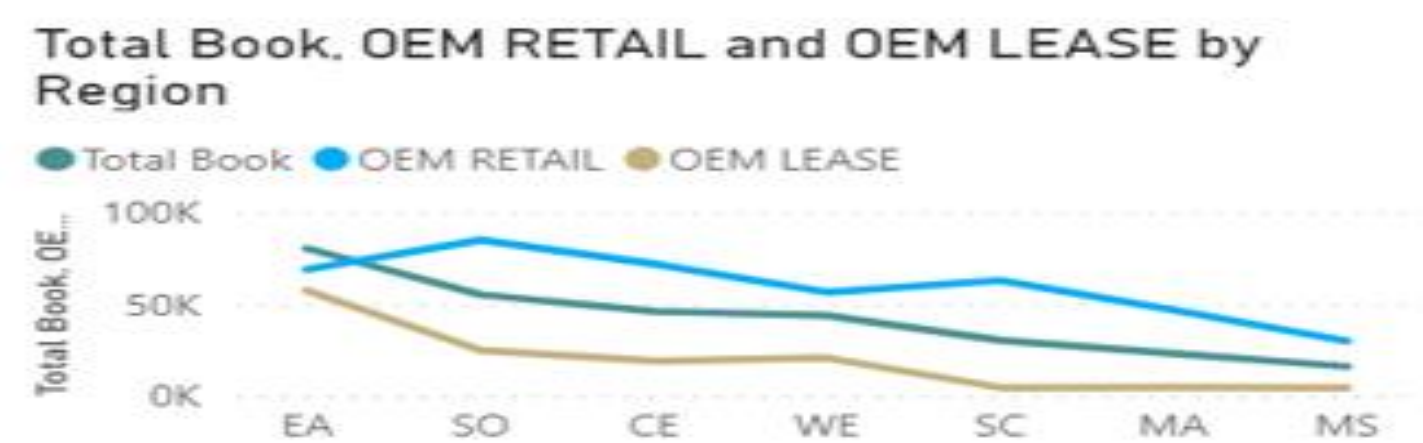
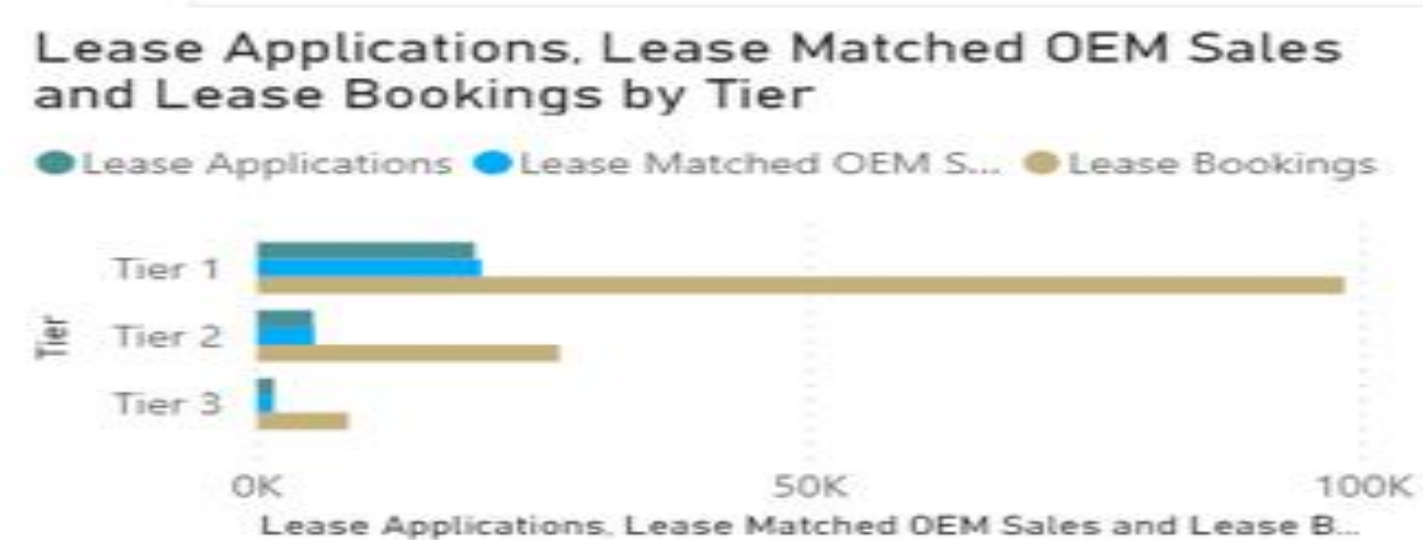
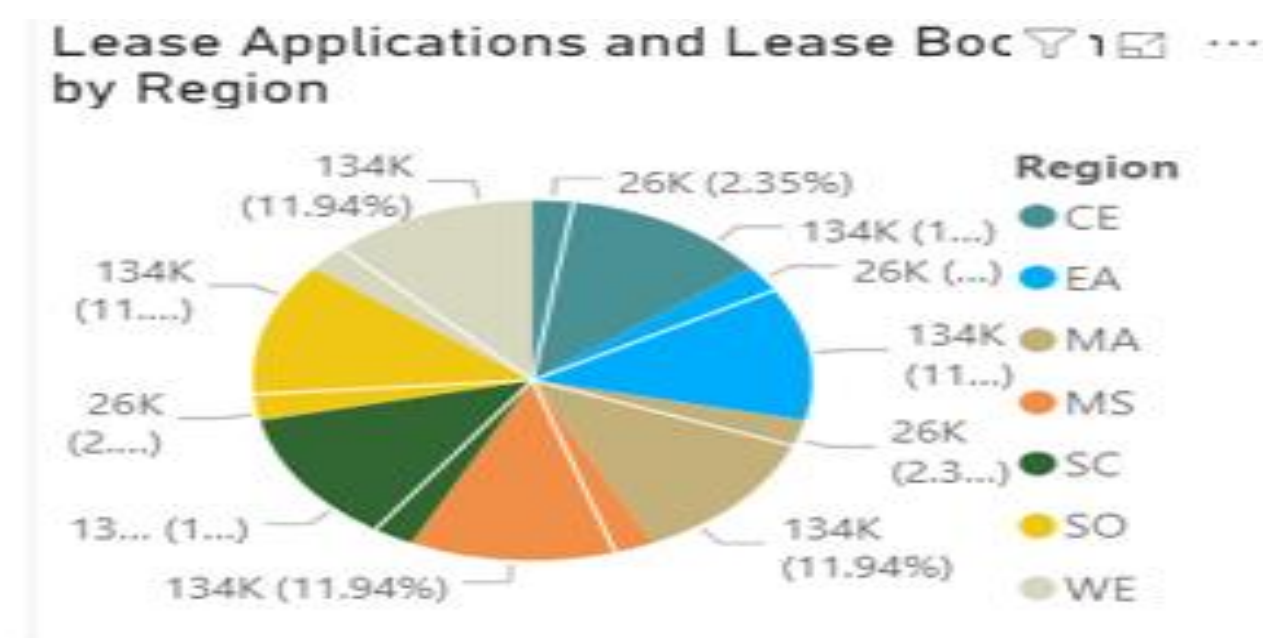
Hyundai Capital of America Artificial Intelligence and Analytics Project

Team A10



Project Background

- HCA is the trusted Captive Finance Partner of Hyundai, Kia and Genesis vehicles
- Over 1.7 million retail customers
- Servicing 1,700 dealerships
- Goal is to develop a tool that will help increase sales.
- To create a live, interactive dashboard.



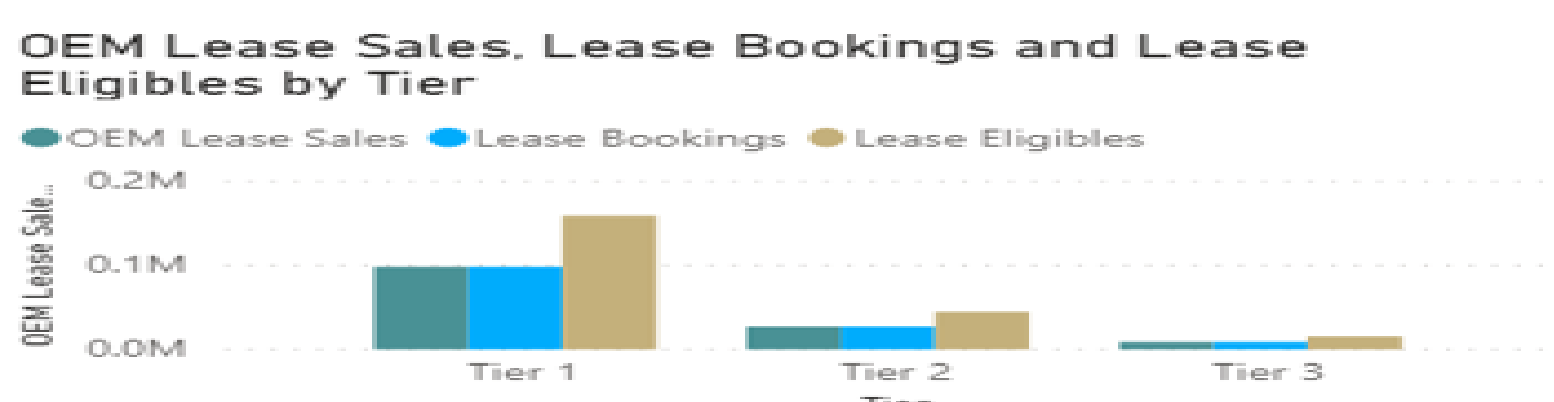
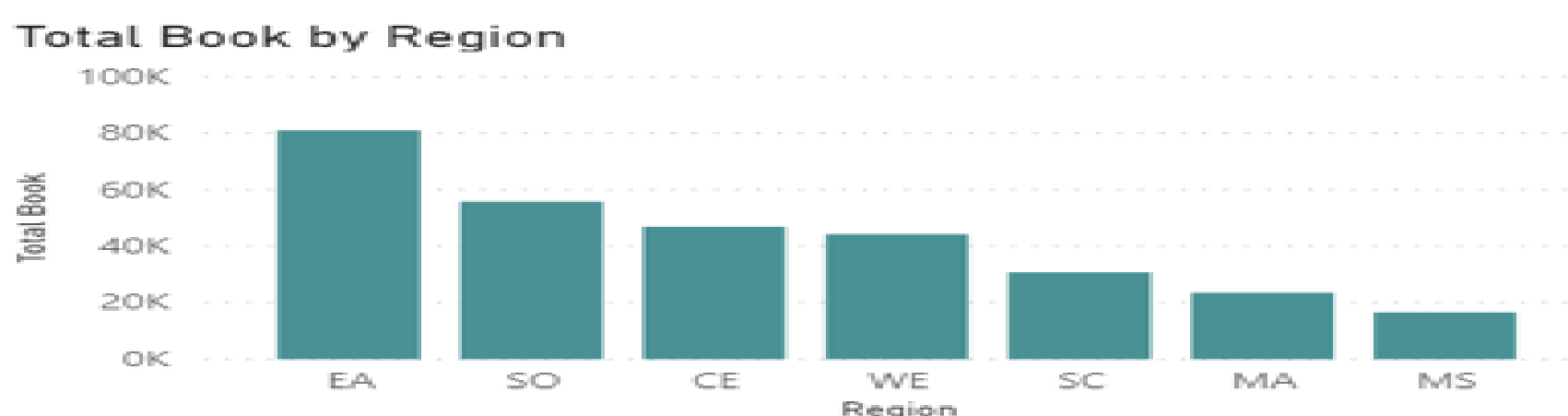
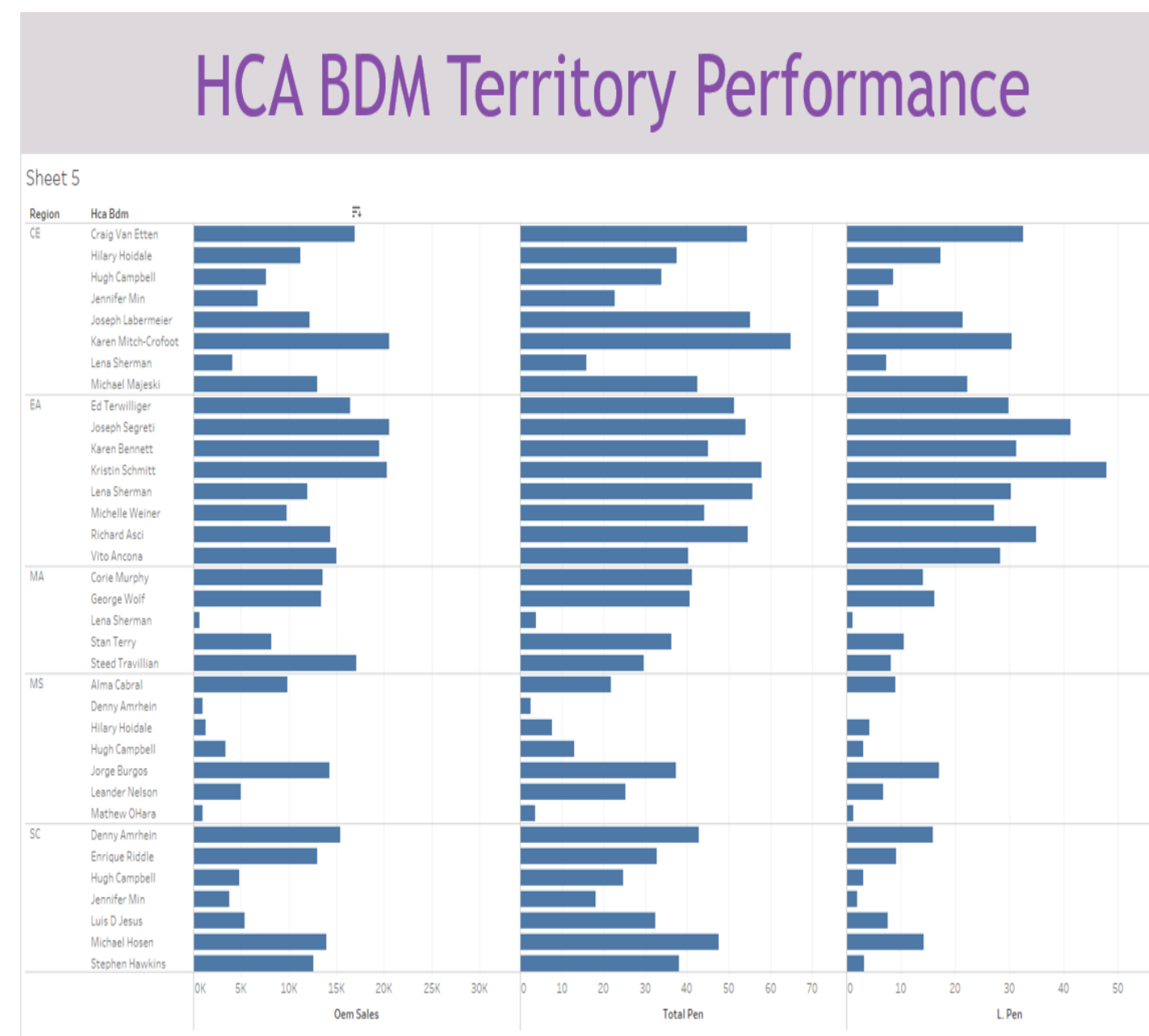
DATA DISCOVERY AND PROFILING

DISCOVERY

- ▶ Data is stored across HCA's locations
- ▶ All data is pooled to a centralized data warehouse
- ▶ In addition to be able to access the data the product development and predictive analytics team can analyze the results
- ▶ The responsibility to discover and determine trends and results is being managed by a very small group
- ▶ They want to improve the process of managing Analytical Tiles, transforming real time data into customized Dashboards

PROFILING

- ▶ Relevant and key data is being constantly updated which makes it necessary to use snapshots to perform all data profiling. Our initial data is:
- ▶ From January 2018 thru December 2019
- ▶ From 1 location
- ▶ 3,251 records
- ▶ Overall average Loyalty rate of 38%
- ▶ Overall take rate of 6.2%
- ▶ 1,110 Defections rates



TOOLS AND TECHNIQUES USED:

- Project and Business Process Management: Agile Methodology, Kanban Board, Scrum, MS Project, Visio
- Microsoft Azure
- Microsoft SQL Server
- SQL Database creation, query and maintenance. SQL Server integration services to perform Extract, Transform and Load.
- Azure Services: Cognitive Analytics, Machine Learning Studio to build data models
- Visual Studio Online
- Regression Models: Logistic Regression, Multiple regression, Time Series Analysis, Categorical variables
- Azure ML
- Power BI: Create Reports, Dashboard, Score Card with defined KPI, Linked it code and create forecasting data model using time series analysis method.
- Social Media Analytics: Search Twitter, Analyze Sentiment, Compare and Visualize
- PowerApps
- Text Mining: Term Frequency, Sentiment Analysis, Classification, Clustering, Word Cloud
- python
- R

