

# Report 1

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Author: 21531782@students.latrobe.edu.au

This SAS Viya Analytics Report offers a comprehensive overview of business performance and strategic insights derived from extensive data analysis across various dimensions. Through visually engaging graphs, charts, and interactive features, the report provides actionable intelligence for optimizing business strategies.

From tracking profit trends across transaction years and countries to analyzing sales performance by location, product category, and brand loyalty, the report delves into nuanced aspects of business operations. Detailed visualizations, including bar graphs, line charts, treemaps, and histograms, offer clear representations of data, facilitating deeper understanding and informed decision-making.

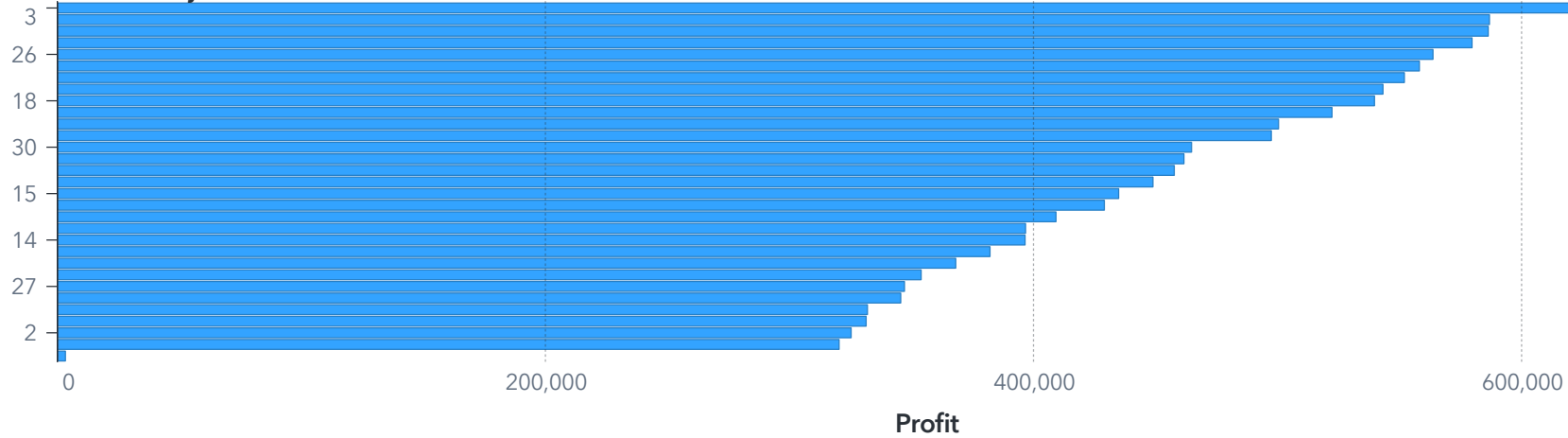
Furthermore, the report employs advanced analytical techniques such as time series analysis and decision trees to forecast sales trends, identify high-value market segments, and recommend targeted marketing strategies. By leveraging SAS Viya's robust analytics capabilities, organizations gain valuable insights into profitability drivers, sales dynamics, and customer behavior, empowering them to optimize resource allocation, refine marketing tactics, and drive sustainable growth.

## Task1

### Profit by Transaction Year

All Transaction Time Hierarchy > 2009 ▼ > 4 ▼ > 12 ▼

#### Transaction Day

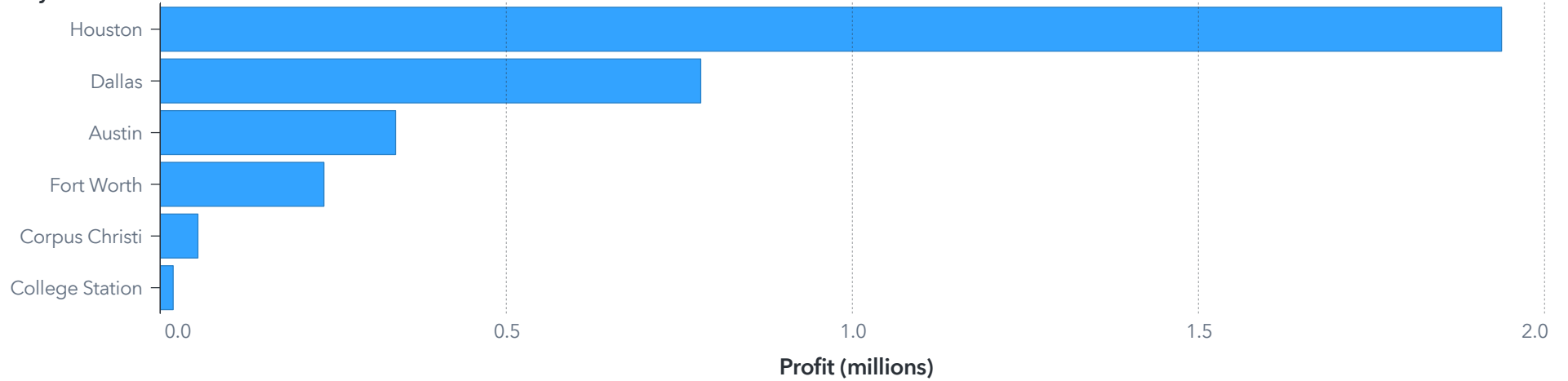


A1.1

### Profit by Country

All Geo Hierarchy > United States ▼ > TX ▼

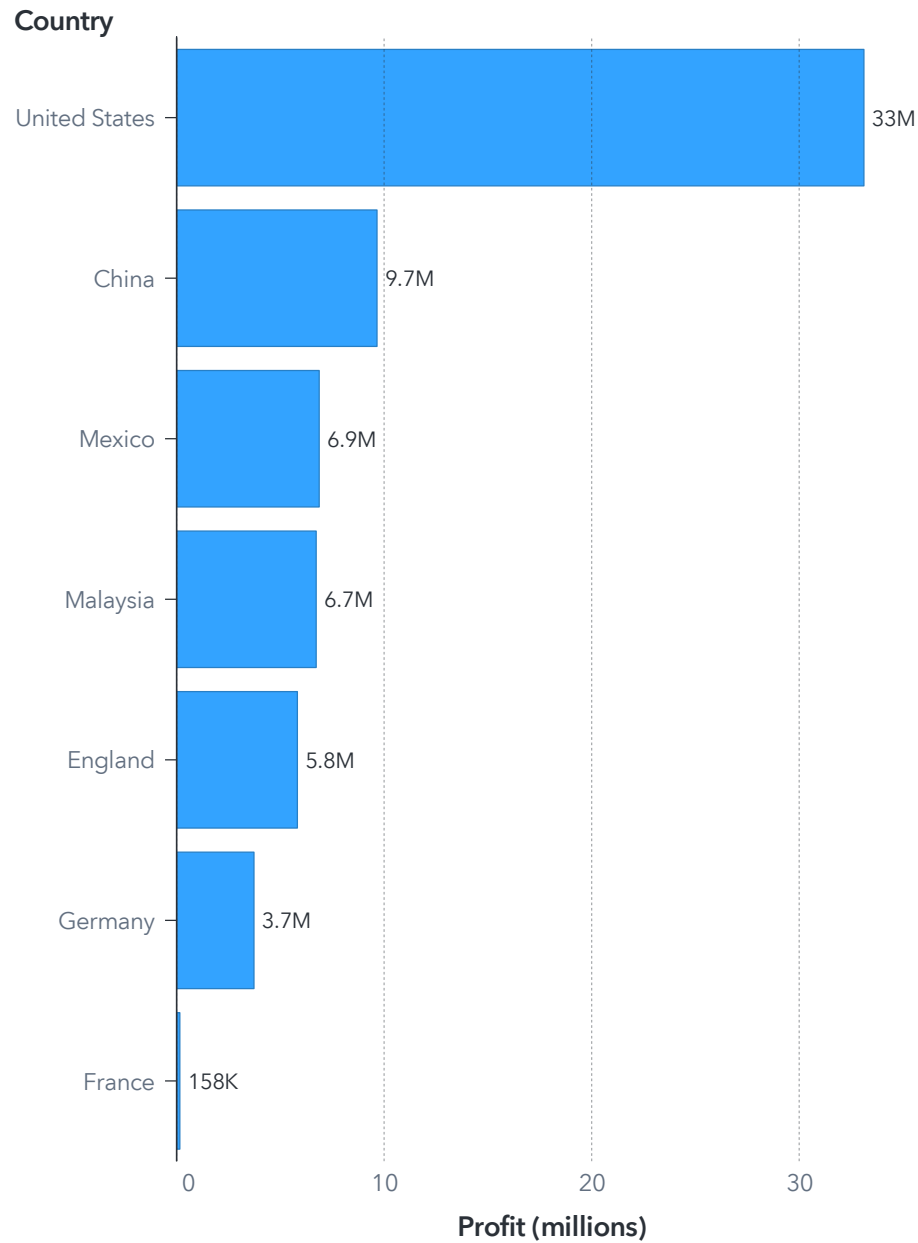
#### City



A1.2

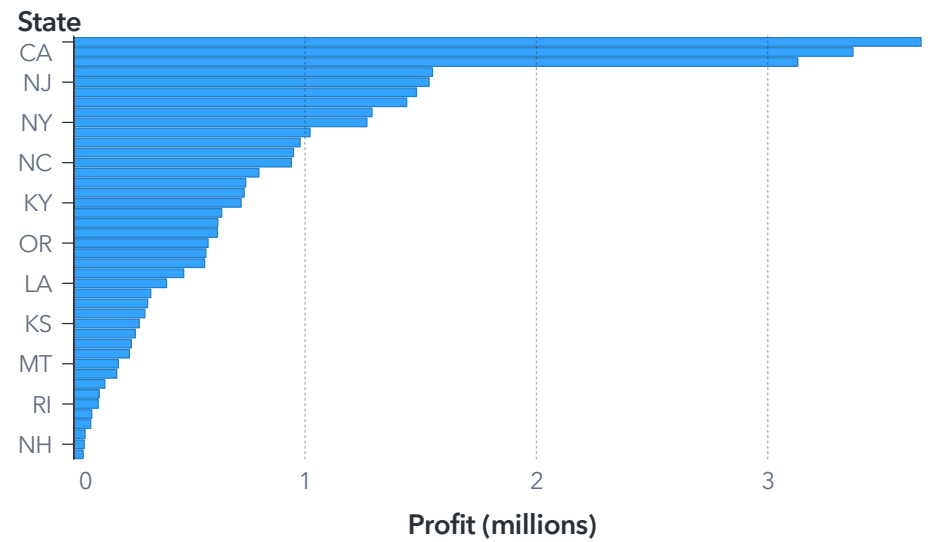
## Task2

Profit by Country



Country ▲	State ▲	Sales ▼	Profit
China	China	14,350,233	9,658,591
Mexico	Mexico	10,540,983	6,872,815
Malaysia	Malaysia	10,231,687	6,727,260
England	England	8,798,900	5,821,448
Germany	Germany	5,498,840	3,730,248
United States	CA	5,340,255	3,662,460
	TX	4,947,737	3,368,193
	FL	4,516,355	3,129,731
	MI	2,292,656	1,550,542
	NJ	2,230,229	1,536,315
	PA	2,186,811	1,481,672

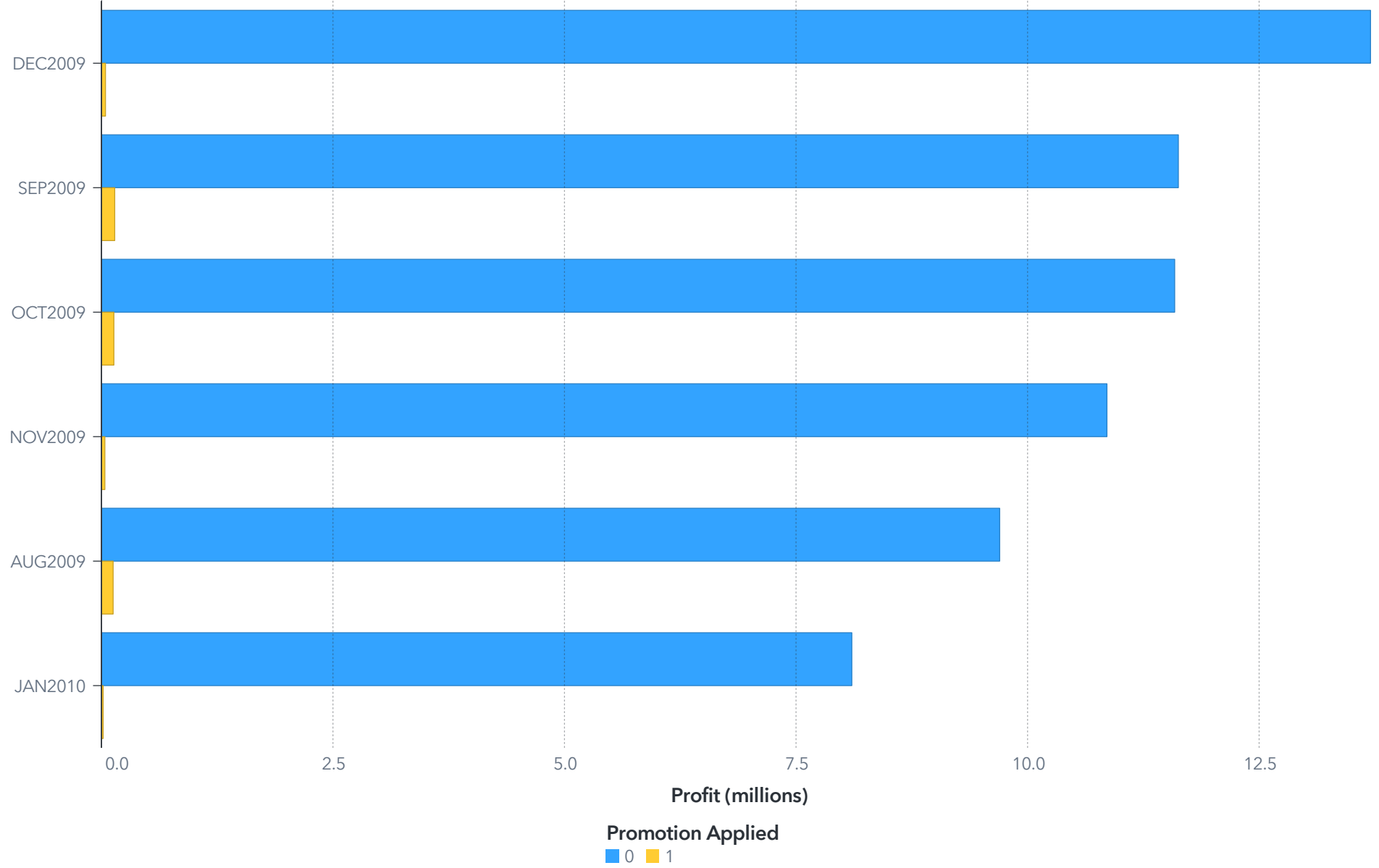
Profit by State in United States



## Task2.3

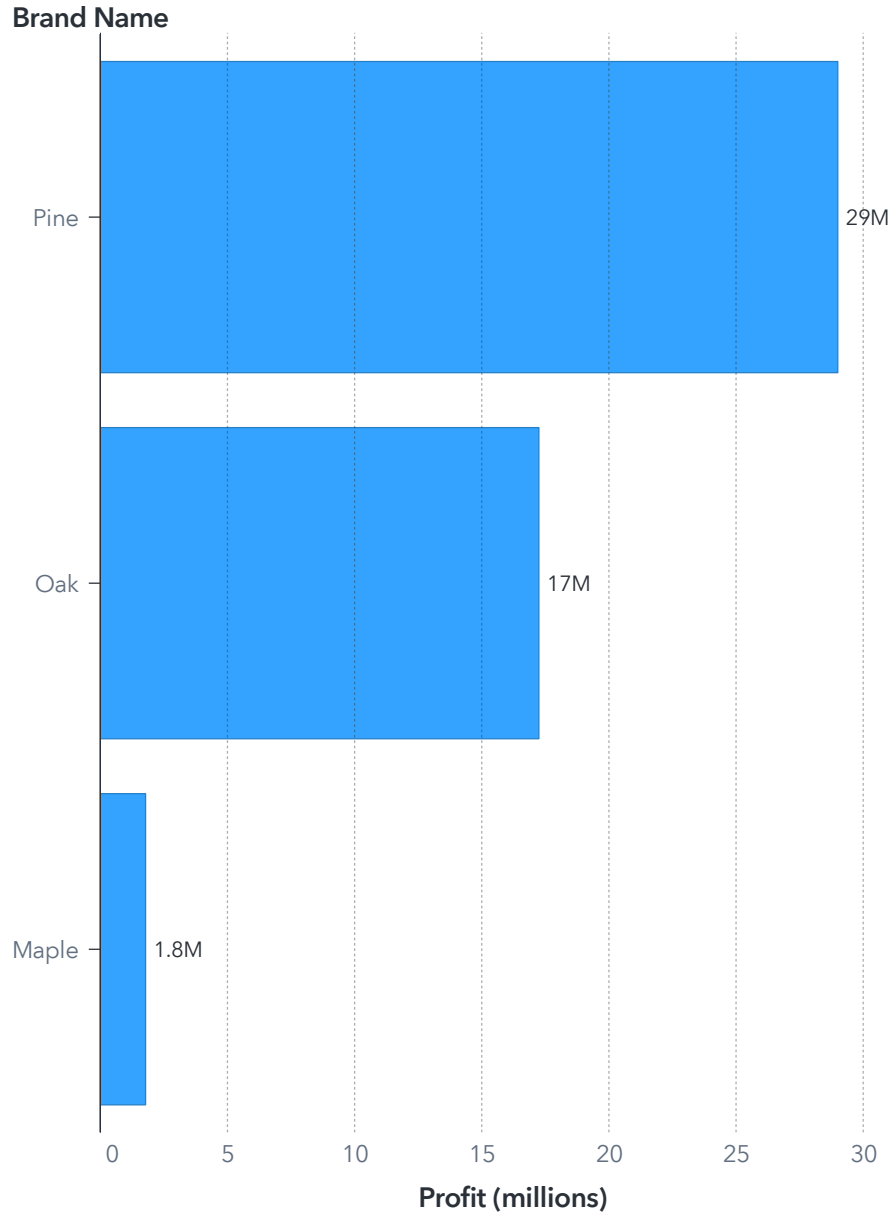
### Profits Over Time for the Brands with Applied Promotion

Transaction MonthYear



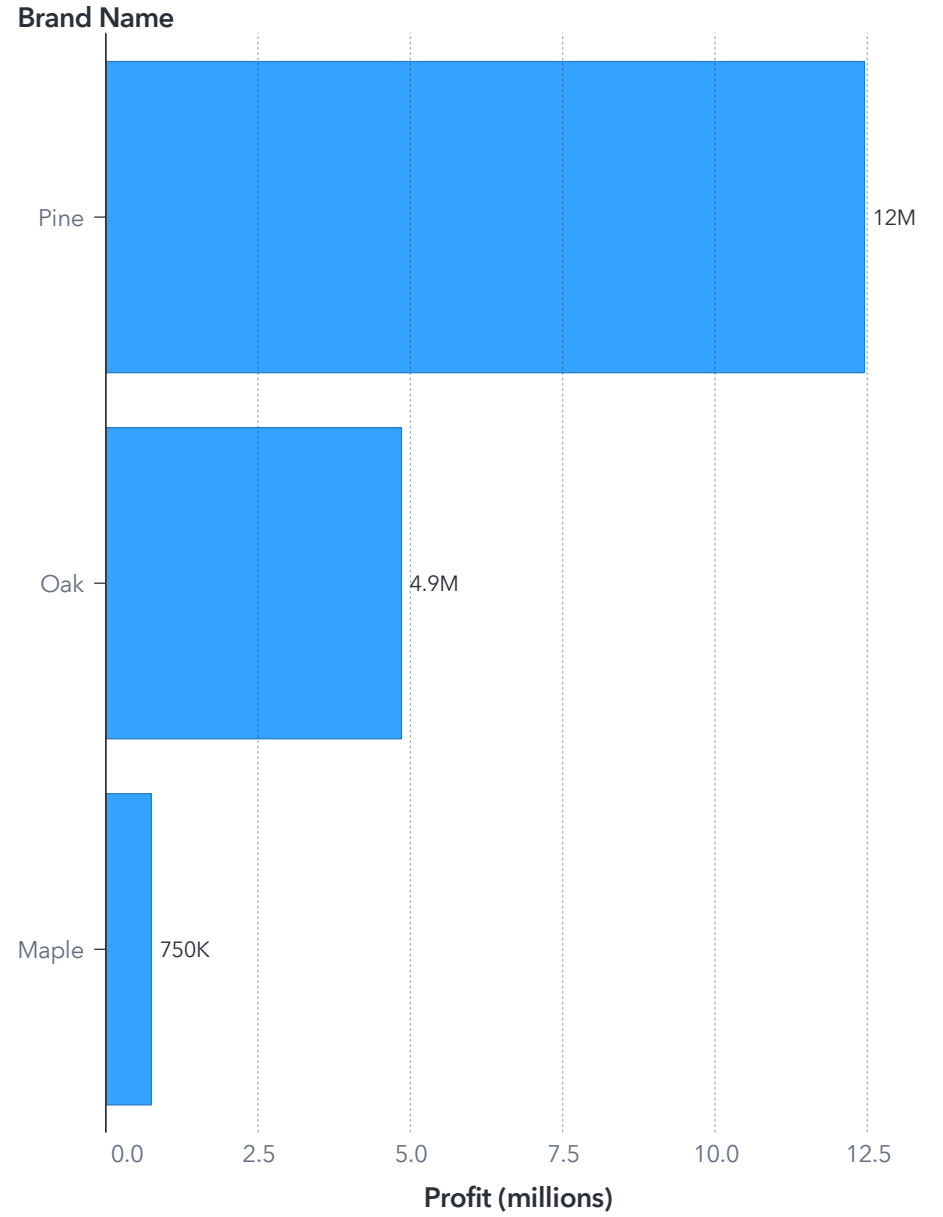
## Task2.4


Profit by Brands Without Loyalty Card



 [A3.1](#)

Profit by Brands With Loyalty Card

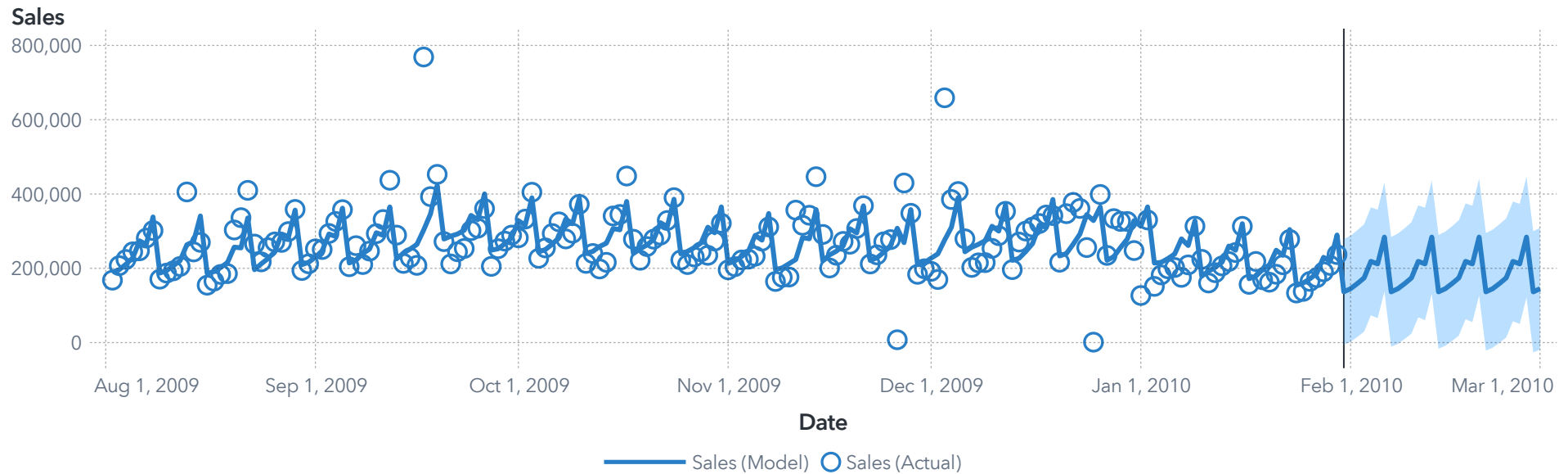
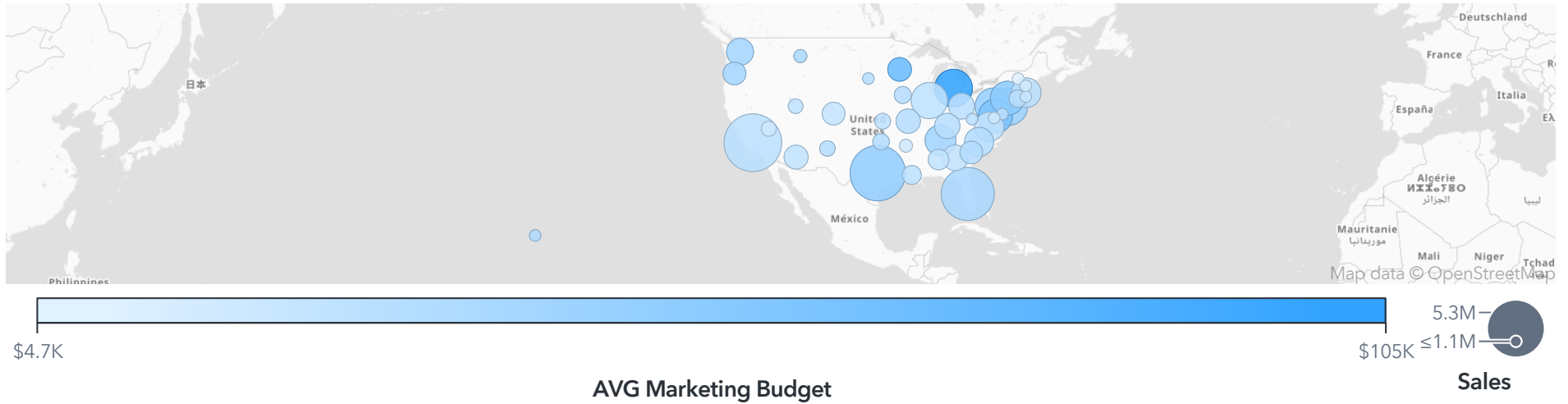


 [A3.2](#)

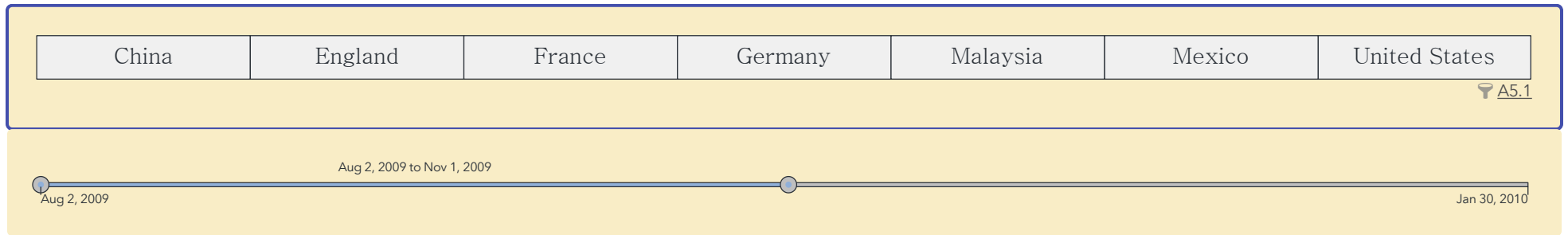
## Task3

### Sales and Average Marketing Budget

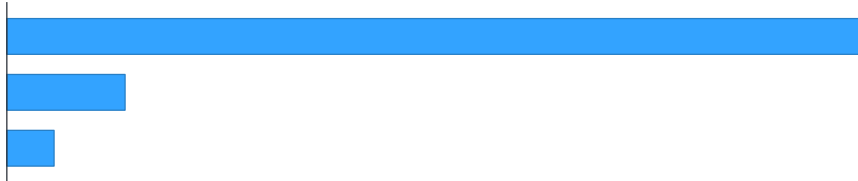
All Geo Hierarchy > United States ▼



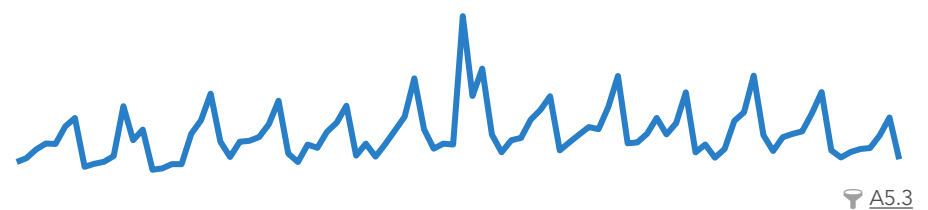
## Task4



Transactions Based on Channel Type



Profit by Date



Sales by Department



Frequency of Cost



Decision Tree of Profit

Fit: ASE 605 Observations: 2.3M of 2.3M

Tree



Variable Importance



Assessment





# Appendix

## A1.1 Profit by Transaction Year

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Drill Levels: Transaction Time Hierarchy: 2009 → 4 → 12

## A1.2 Profit by Country

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Drill Levels: Geo Hierarchy: United States → TX

## A2.1 Profit by State in United States

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Filters: ( Country IN { 'United States' } ) OR Country MISSING

## A3.1 Profit by Brands Without Loyalty Card

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Filters: Loyalty Card = 0

## A3.2 Profit by Brands With Loyalty Card

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Filters: Loyalty Card = 1

## A4.1 Sales and Average Marketing Budget

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Drill Levels: Geo Hierarchy: United States

## A4.2 Forecasting - Date 1

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Filters: Country = 'United States'

## A5.1 Button bar - Country 1

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Filters: Aug 2, 2009 ≤ Date ≤ Nov 1, 2009

## A5.2 Transactions Based on Channel Type

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Filters: Aug 2, 2009 ≤ Date ≤ Nov 1, 2009

### A5.3 Profit by Date

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Filters: Aug 2, 2009  $\leq$  Date  $\leq$  Nov 1, 2009

### A5.4 Sales by Department

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Filters: Aug 2, 2009  $\leq$  Date  $\leq$  Nov 1, 2009

### A5.5 Frequency of Cost

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Filters: Aug 2, 2009  $\leq$  Date  $\leq$  Nov 1, 2009