PowerBI Introduction

Aggie Data Science Club

To get started:

1. Download the data and slides from Discord or Github
2. Go to this link: https://app.powerbi.com
3. Make an account with your TAMU email

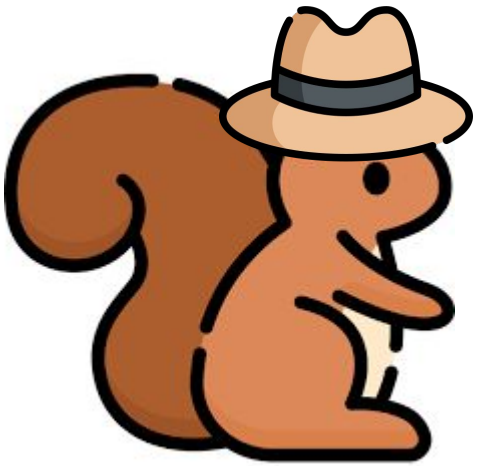
What is Business Analytics?

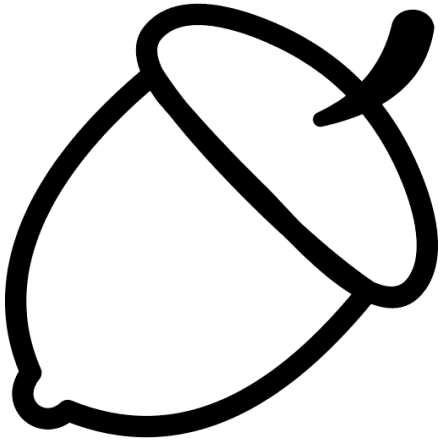
- ***Extract insights!***
- Facilitate efficient data collection, analysis, and presentation in *real-time*
- Empower enterprises to identify trends/patterns in vast datasets and create new business analytics models...
- Similar to data science, right?
  - Same goal but different methods
  - Less coding, larger scope, more attune to domain problems

Modern Tools

- QlikView
- Splunk
- Tableau
- Excel
- PowerBI
- Apache Spark

What is PowerBI?





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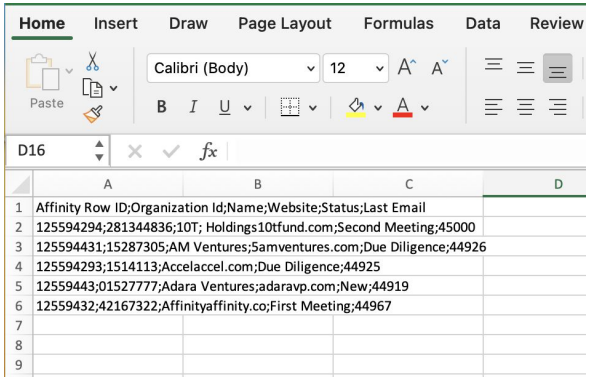

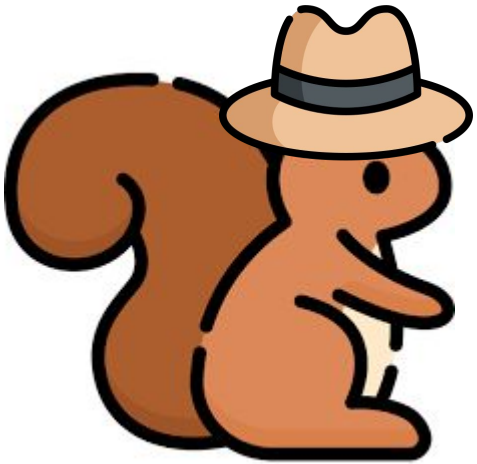

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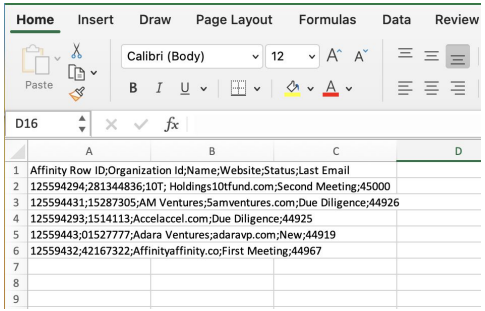

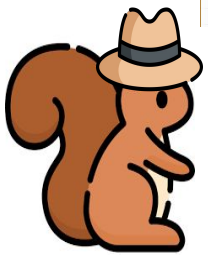

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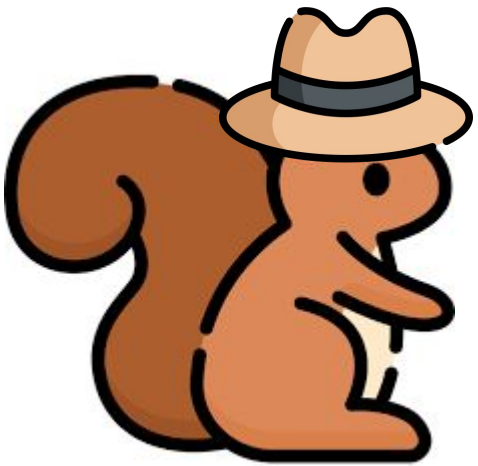

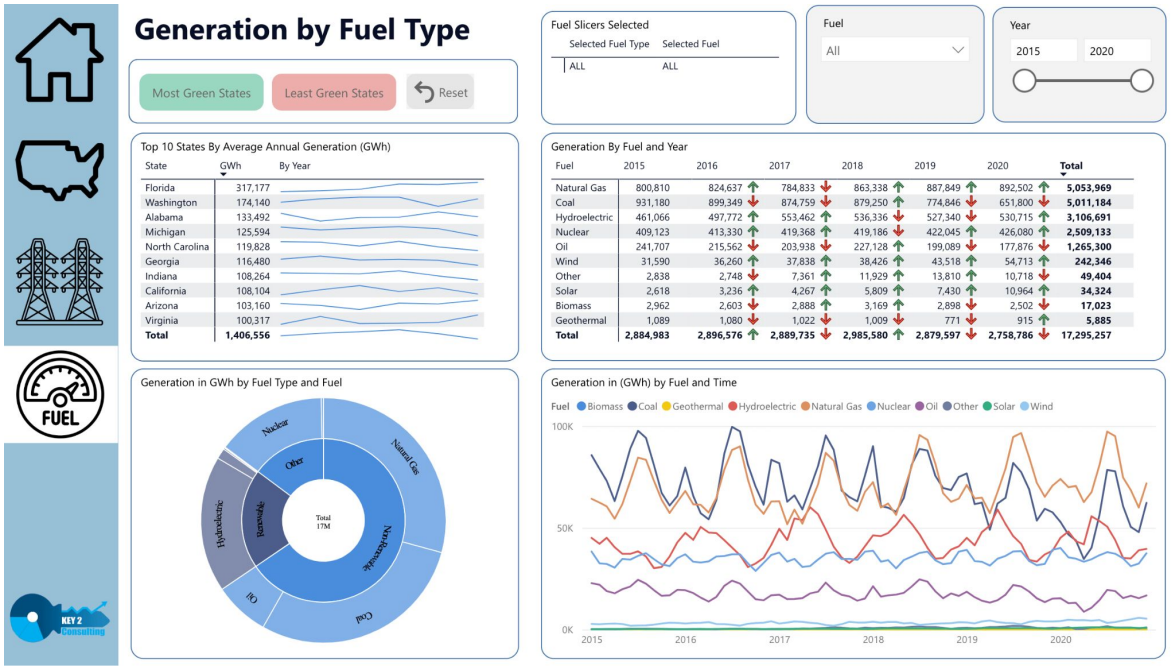

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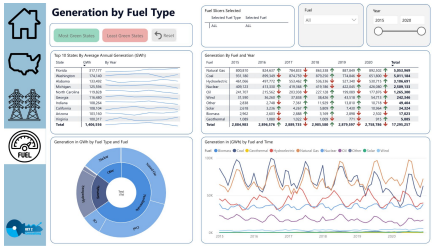

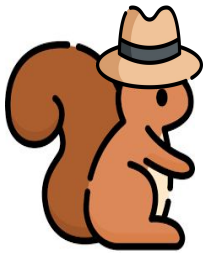

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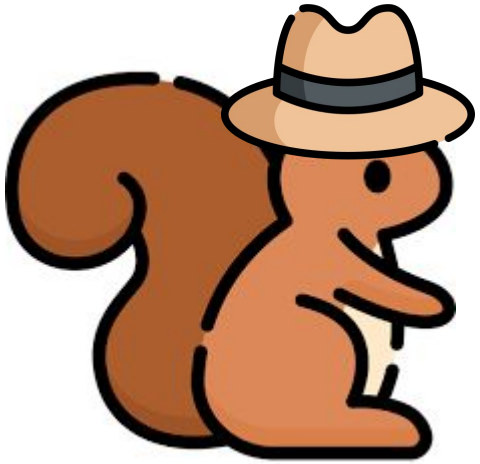


Tutorial

1. Sign up for free trial
2. Download the application (optional)
    a. More services
3. Load data
    a. Charts
    b. Getting count on a column
4. Build visualizations
5. Q/A with data
6. Adding pages
7. Publishing

The Scenario

Company Scenario:

Welcome to the **Pandas & Pies Brokerage**, a distinguished real estate company nestled in the heart of Texas, focusing on College Station and Bryan. Established in 2004, the **Pandas & Pies Brokerage** has rapidly grown into a trusted name in the real estate market. Over the years, we've catered to a diverse clientele, ranging from college students seeking affordable housing to investors looking for property deals.

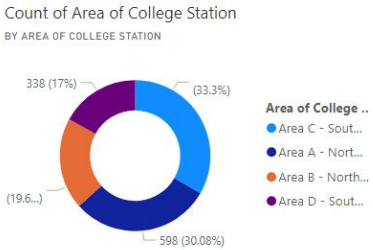
As the global economy faced a recession in recent years, Brokerage observed a fluctuating trend in housing demands, influenced by economic uncertainties and changing demographics. Despite this, the recession has opened up unique investment opportunities, and our goal is to capitalize on them to increase brand awareness and solidify our market position.

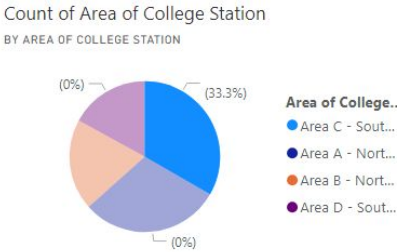
Task:

Using a dataset with housing data from College Station and Bryan, your role is to analyze, interpret, and present findings that will guide our investment decisions. You will address five key questions, each requiring a unique blend of data analysis, visualization, and predictive modeling.

Question 1: What is the distribution of areas to live in?

- Look at the **Area of College Station** column
- How can you show the distribution of values in this column?





Count of Area of College Station

BY AREA OF COLLEGE STATION

Area of College Station	Count of Area of College Station
Area A - North or Rock Prairie Rd. and West of Texas Ave.	598
Area B - North of Bird Pond Rd and East of Texas Ave.	390
Area C - South of Rock Prairie Rd. and West of Hwy. 6	662
Area D - South of Bird Pond Rd. and East of Hwy. 6	338
Total	**1988**

Question 2: Who are the renters?

As a brokerage, we want to increase the amount of lease agreements we make to earn consistent commissions.

- **Based on our need for more renters, what demographic or types of living should we target?**
- Primary column of interest: **Own or rent** column
- Compare with other columns like “Age” or “Years have you lived in College Station”

Question 3: What should we focus on?

Based on your findings from the previous question, you should have a good idea of the demographic that sign lease agreements. Because we are trying to solidify our market position, we want to manage properties that have certain favored characteristics and we need to determine which ones to prioritize.

- **What do renters find important?**
- Filter by **Own or rent** column
- Analyze the **Importance of X** columns and find the prevailing sentiments

Rubric

- Presentation (flow, timing of 5 minute) - 10 points
- Communication (public speaking) -10 points
- Catering to stakeholders (understandable to audience) -10 points
- Answers to Questions (correctness) -5 points
- Explanations to Questions (evidence, more important)- 25 points
- Use of PowerBI (dashboard, style) - 40 points