Paige Pearson

Data Analyst Portfolio

Who am I? ..

As a data analyst with a background spanning education, tourism, and retail, I incorporate my diverse experiences to adapt with every new project. My time state-side and abroad has helped me balance the nuanced challenges of cross-cultural communication while maintaining my work ethic and decisiveness.

Proficient with tools such as SQL, Python, Tableau, and MS Excel, I identify patterns, craft data-driven stories, and ensure precise documentation in my work. My experiences have not only refined my thoroughness and organizational skills, but has also molded me into a resourceful analyst, ever eager to bring clarity to multifaceted data landscapes.

Projects

1: Leveraging data analysis to strategize regional marketing initiative

2: Optimizing resource allocation based on demand forecasts

3: Crafting novel business strategy for online distribution

4: Customer profiling and sales pattern segmentation

5: Examining influencing factors of online traffic

Project #1: Leveraging Data Analysis to Strategize Regional Marketing Initiative

Objective

Aid the marketing team to make a more accurate budget.

Skills

- Data Cleaning
- Descriptive Statistics
- Data Visualization
- Presenting Findings to Stakeholders

Tools

MS Excel

MS PowerPoint

Research Methodology

Exploratory Data Analysis

- Examine the data's structure and variables
- Identify the data source and collection methods

Cleaning Data

- Handle missing values, duplicates, and inconsistencies
- Ensure data consistency, quality, and integrity

Data Preparation

- Aggregate data as needed for analysis
- Create subsets or groupings for specific analysis

Descriptive Statistics

- Calculate and log basic statistics
- Gain an overview of data distribution

Analysis and First Insights

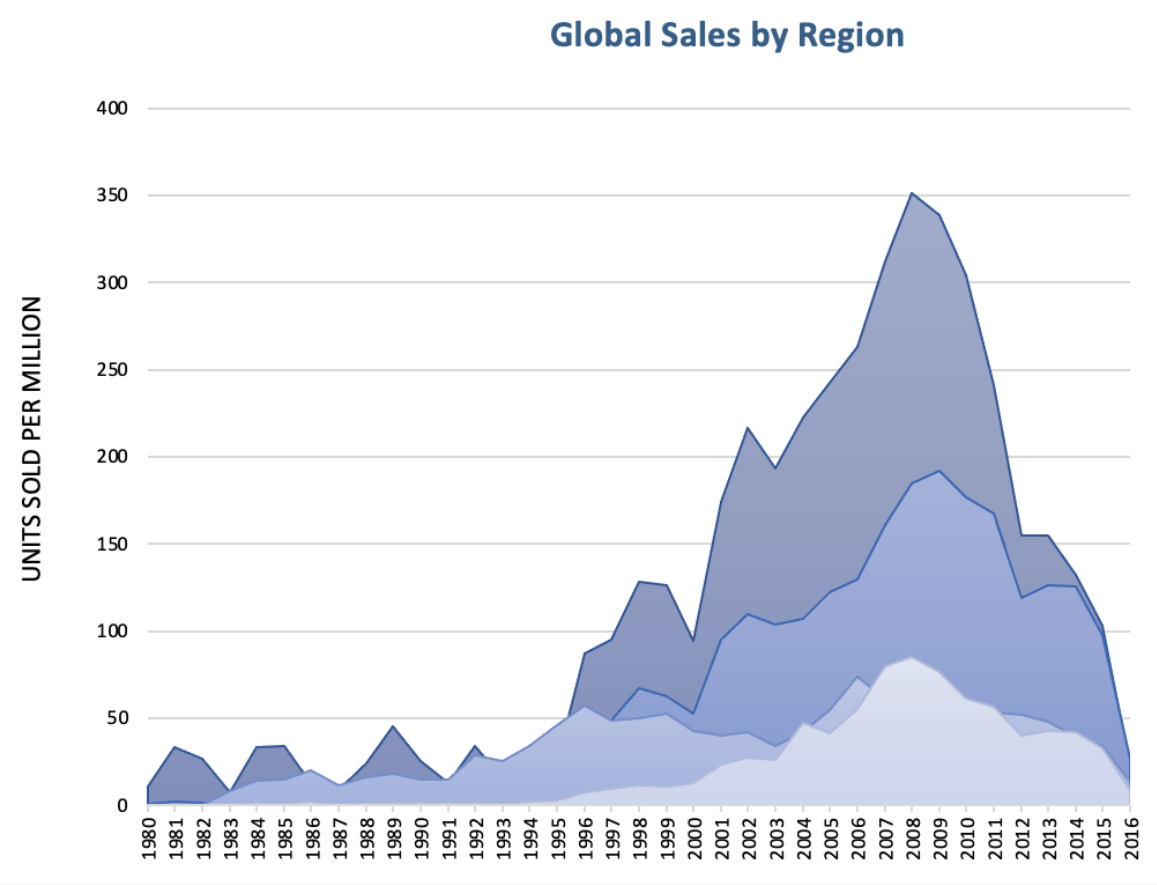
- Form observations based on EDA and descriptive statistics
- Identify potential patterns and investigate data as needed

Creating Presentation

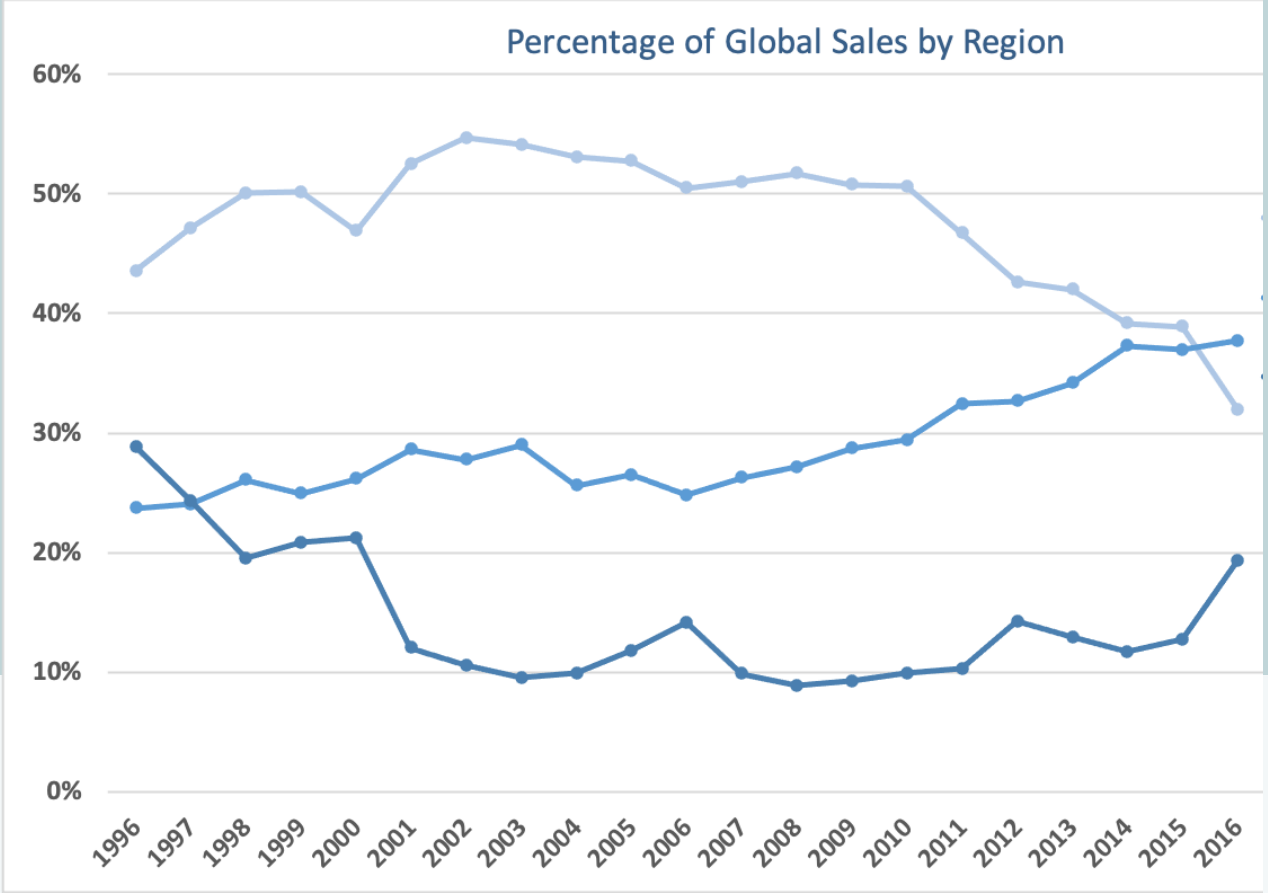
- Generate charts and graphs to visually represent data
- Prepare a structured presentation to communicate findings

Presenting to Stakeholders

- Share insights and visualizations to relevant stakeholders
- Address questions and provide clarifications



Findings ..



Sales have not remained the same over time. A region-focused approach to resource distribution is recommended.

Project #2: Optimizing Resource Allocation Based on Demand Forecasts

Objective

Reduce waste and increase efficiency within a staffing agency through resource optimization.

Skills

- Data Dashboard
- Data Cleaning/Wrangling
- Data Integration
- Statistical Hypothesis Testing
- Forecasting with Seasonality
- Video Presentation to Stakeholders

Tools

- MS Excel
- Tableau
- QuickTime Player
- iMovie

Research Methodology

Business Requirements

- Understand objectives and deliverables of the project to guide analysis

Sourcing Data

- Create a data wish list
- Decide which data to use that meets the projects needs

Cleaning/ Wrangling Data

- Prepare the data for analysis by handling any issues
- Integrate the datasets and document the process

Data Profiling

- Generate a profile of the cleaned data to understand it's characteristics

Statistical Analysis

- Calculate descriptive statistics
- Perform statistical hypothesis tests to validate or refute initial hypothesis

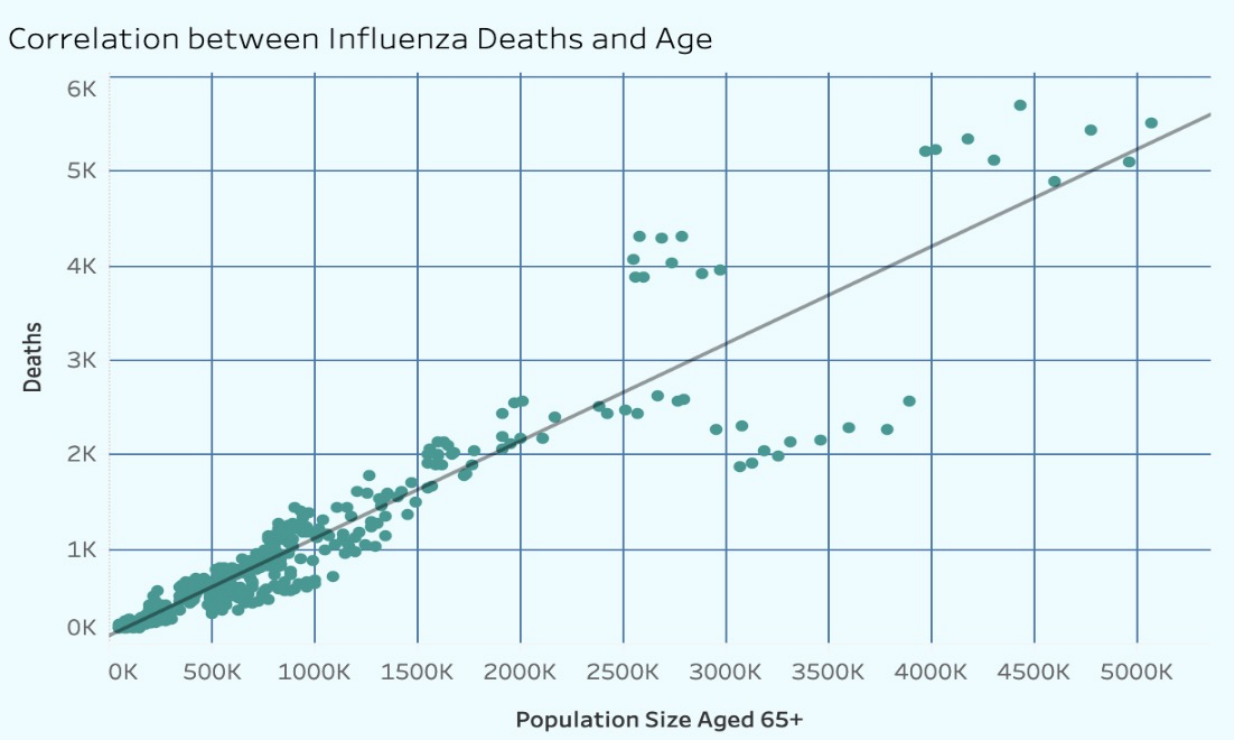
Visualizations

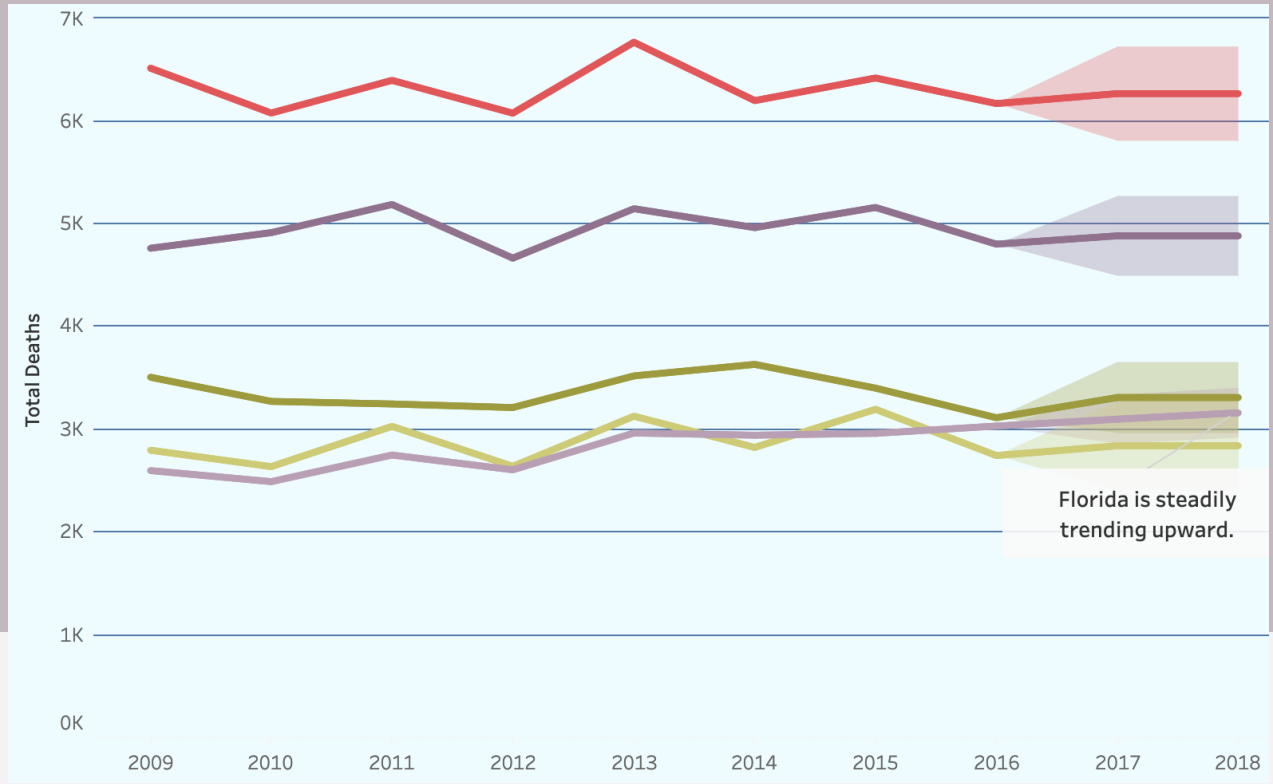
- Create interactive charts to highlight aspects of the project
- Craft a dashboard to tell a story with the data

Finalize Project Deliverables

- Prepare a video presentation to present findings to stakeholders
- Follow up on any questions following the project via email

Findings ..





A tailored approach to staffing allocation was created to fit the needs of all types of communities across the US.

Project #3: Crafting Novel Business Strategy for Online Distribution

Objective

Examine sales data to assess the current state of the company and develop a strategy to grow the customer base and market share.

Skills

- Data Dictionary
- Entity Relational Diagram
- Common Table Expressions, Joins, and Subqueries in SQL
- Data Dashboard

Tools

- MS Excel
- MS PowerPoint
- PostgreSQL
- Tableau

Research Methodology

Business Requirements

- Gain a clear understanding of the requirements, objectives, and project deliverables.

Explore Data

- Familiarize oneself with the database's structure, variables, and content
- Generate descriptive statistical data

ERD and Data Dictionary

- Visualize relationships with an Entity Relational Diagram
- Document the attributes of each data field for reference

Answering Questions

- Use the provided business questions to define the scope of the analysis and use it as a launch point for further insights

Diving into Insights

- Extend analysis to explore additional insights or patterns that could benefit the company

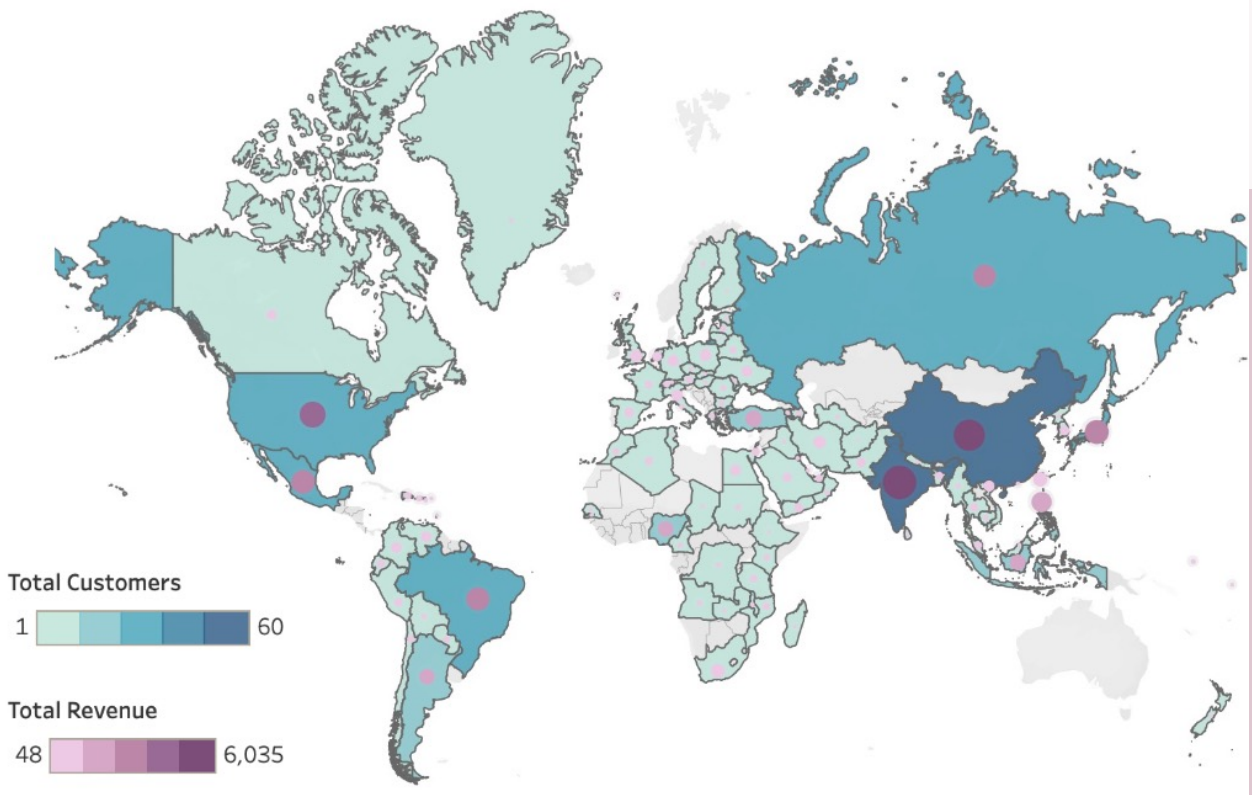
Charting a Narrative

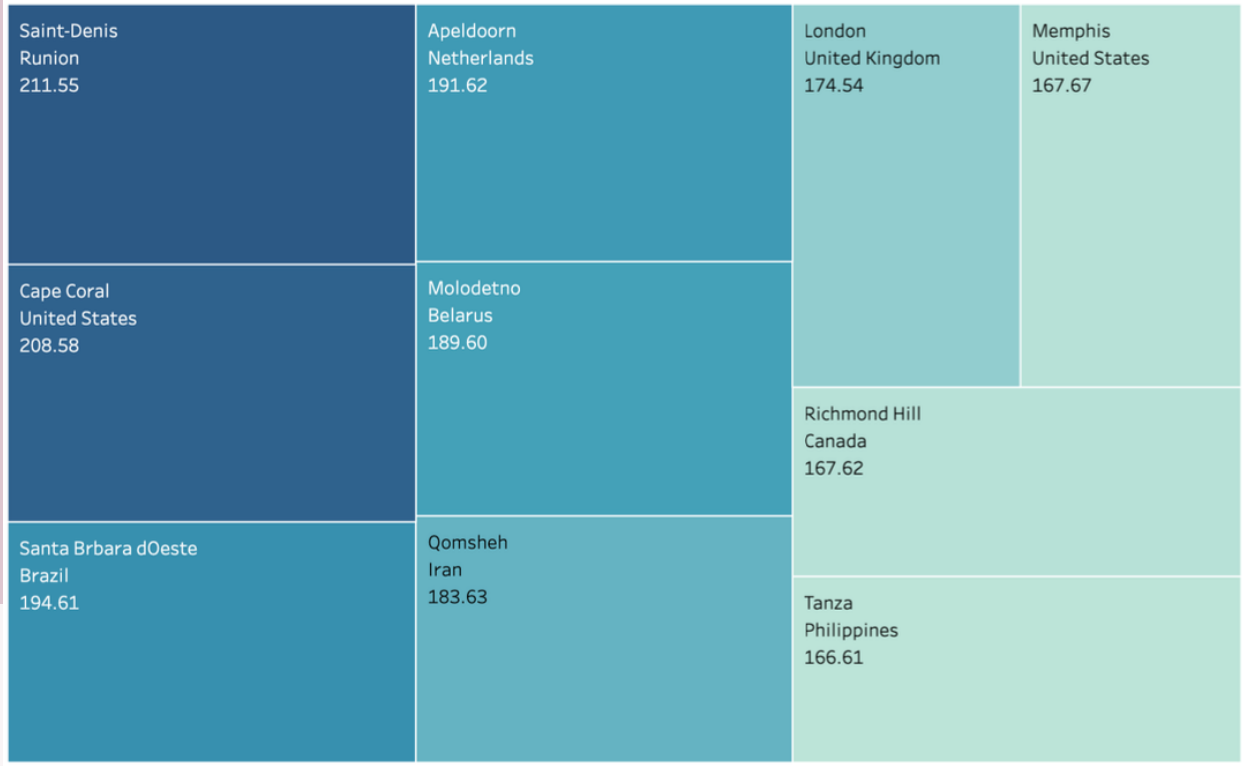
- Generate charts and graphs to visually represent data
- Prepare a structured presentation to communicate findings

Project Deliverables

- Finalize all parts of the deliverables and send to client – A Data Dictionary, Presentation, and SQL Data Report

Findings ..





Countries are divided into organized groups to allow the marketing and sales teams to focus their efforts as needs change.

[GitHub Project Here]

Project #4: Customer Profiling and Sales Pattern Segmentation

Objective

Understand customer base in order to design strategies to retain and build brand loyalty.

Skills

- Data Cleaning
- Data Wrangling
- Statistical Analysis
- Data Flags and Merging
- Grouping and Aggregating Data
- Interim Report

Tools

MS Excel

Python

Research Methodology

Exploring the Data

- Examine the data's structure and variables

Consistency Checks

- Handle missing values, duplicates, and inconsistencies
- Ensure data consistency, quality, and integrity

Merging Datasets

- Merge sales data and customer data together using Python
- Use previous checks to ensure data quality

Grouping and Aggregating

- Calculate and log basic statistics
- Create new variables and groupings to begin analysis

Customer Profiles

- Use data flags to build profiles around different variables
- Gain insight into the different types of customers

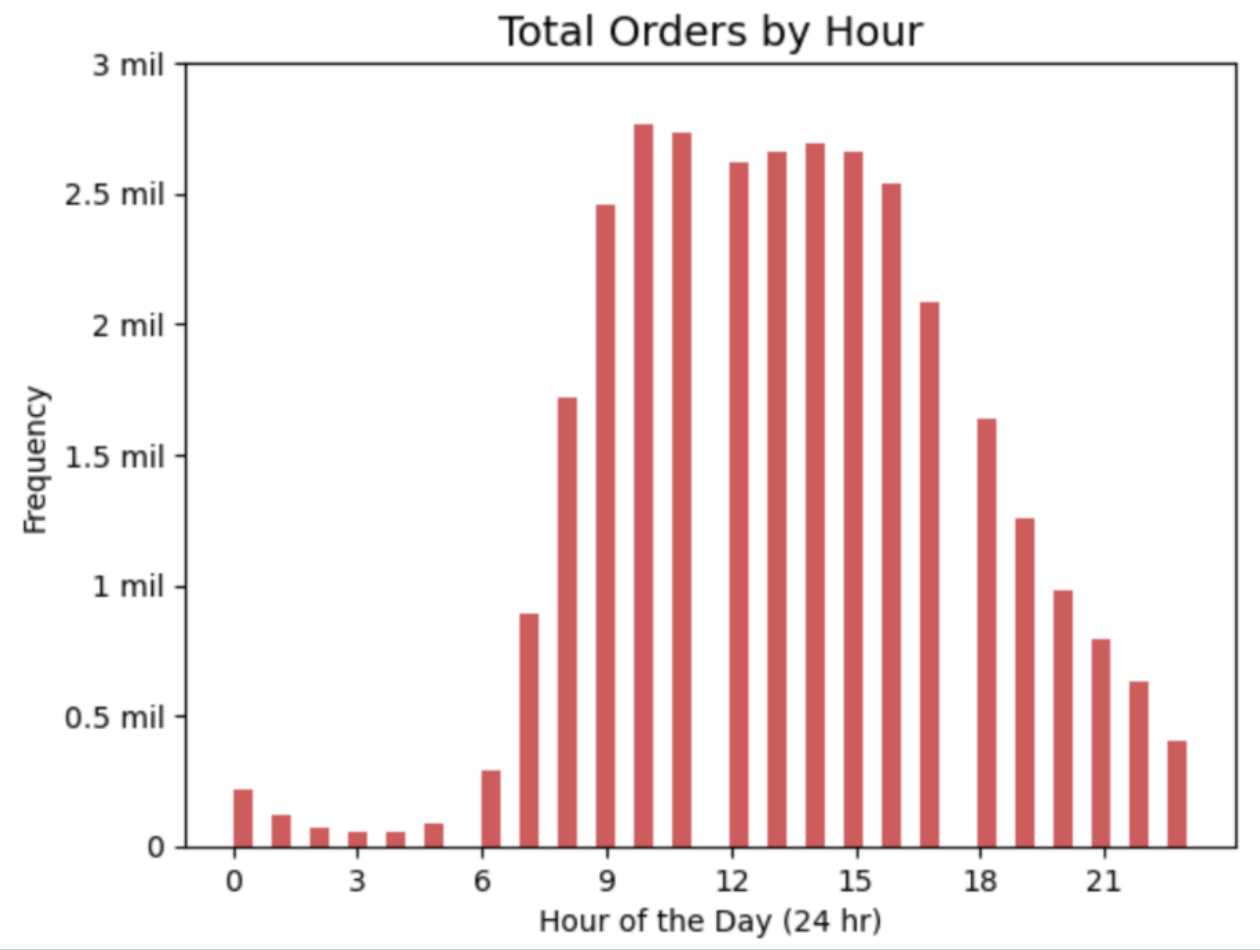
Visualizations

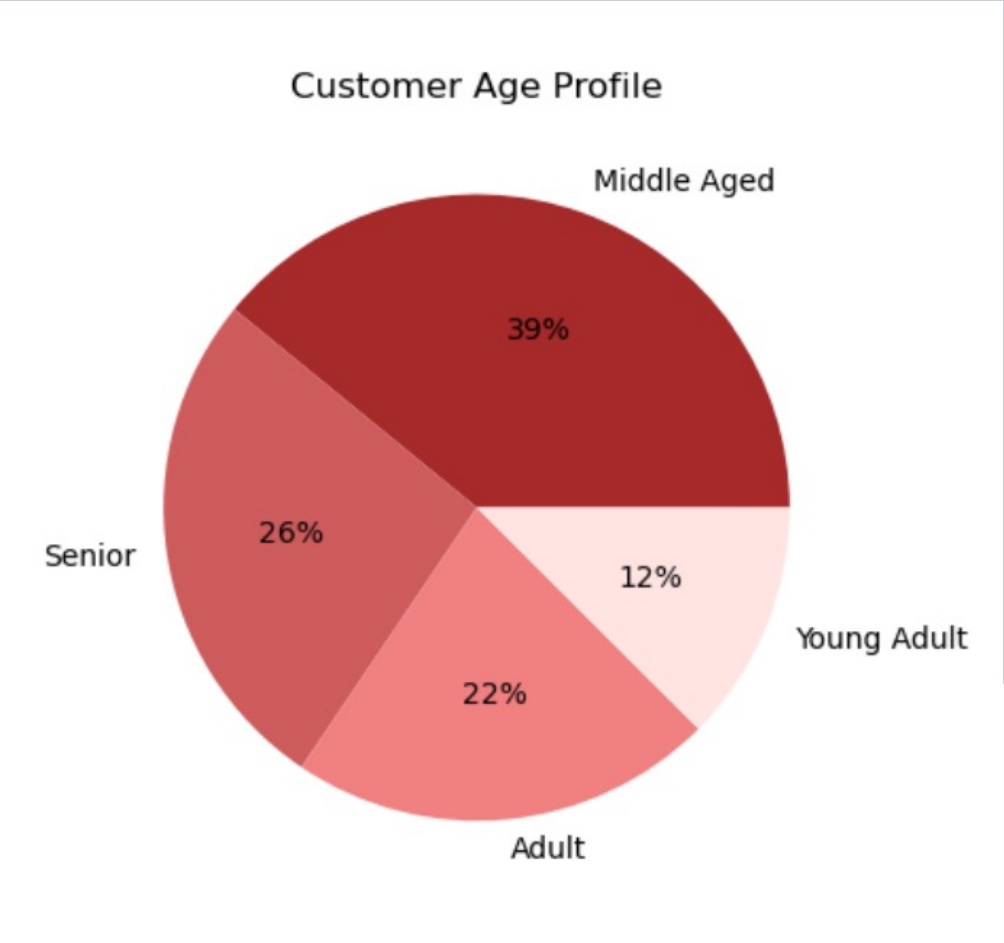
- Use Python to create charts and graphs to visually represent the data and bolster customer profile findings

Interim Report

- Finalize interim report with all information organized and easily accessible

Findings ..





The Marketing and Sales teams were sent results on customer profiles to develop better segmentation and tailor new strategies going forward.

GitHub Project Here

Project #5: Examining Influencing Factors in Online Traffic

Objective

Determine which products draw more online traffic and why to inform client's upcoming marketing strategies.

Skills

- Data Cleaning
- Descriptive Statistics
- Data Visualization
- Cluster Analysis
- Regression Analysis
- Data Dashboard

Tools

- MS Excel
- MS PowerPoint
- Python
- Tableau

Research Methodology

Sourcing Data

- Identify the data source and collection methods

Exploring the Data

- Examine the data's structure and variables
- Identify any limitations to the data

Cleaning the Data

- Handle missing values, duplicates, and inconsistencies
- Create subsets or groupings for specific analysis

Initial Analysis

- Calculate and log basic statistics
- Gain an overview of data distribution

Cluster Analysis

- Identify potential patterns and investigate data as needed
- Examine how variables shift within clusters

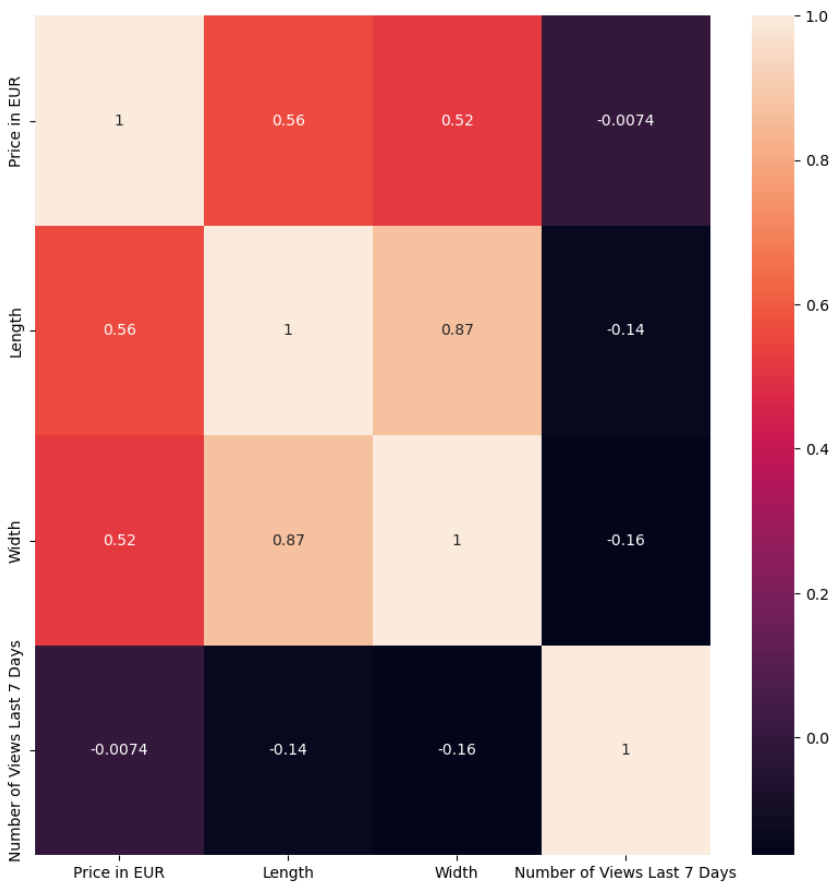
Creating Dashboard

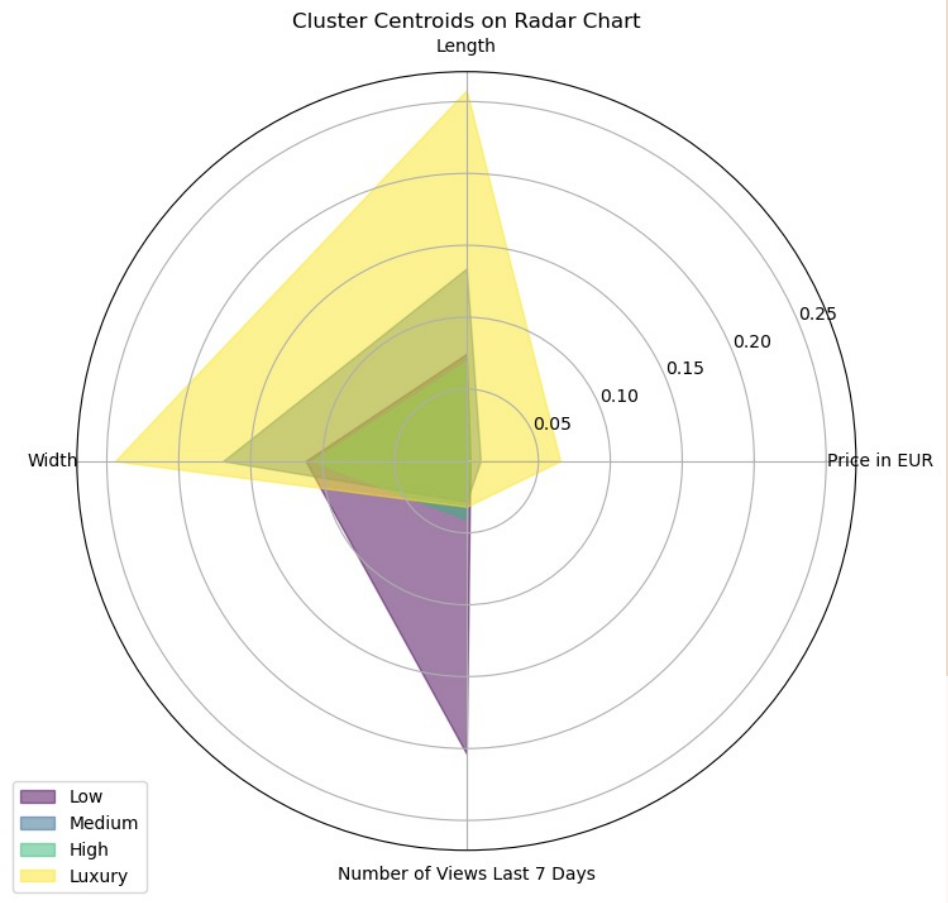
- Generate charts and graphs to visually represent data
- Prepare a structured presentation to communicate findings

Presenting to Stakeholders

- Share insights and visualizations to relevant stakeholders
- Address questions and provide clarifications

Findings ..





Client was sent results on product profiles to develop better segmentation and tailor new strategies going forward.

GitHub Project Here

Thank You ..

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Linkedin Here

GitHub Here

Credits:

- Icons from Slidesgo
- Cover and Back Photo – Unsplash user kmuza