Campervan Rental Business Analysis Report

Tourism Data Analysis

Processing file: tourism_stavanger.json
Processing file: tourism_haugesund.json
Processing file: tourism_ryfylket.json
Tourism Data Analysis Summary:
==========
1. Total Overnight Stays by Region (Last Year):
Region
Haugesund/Haugeland 355810.0
Ryfylke 214576.0
Stavangerregion 1945546.0
Name: value, dtype: float64

2. Year-over-Year Growth by Region (Last Year):
Region
Haugesund/Haugeland 0.095272
Ryfylke 0.108908
Stavangerregion 0.050657
dtype: float64

3. Most Popular Accommodation Type by Region:
Region
Haugesund/Haugeland (Haugesund/Haugeland, Hotels and similar estab...
Ryfylke (Ryfylke, Camping sites, holiday dwellings and...
Stavangerregion (Stavangerregion, Hotels and similar establish...
Name: value, dtype: object

Plots generated:
1. total_tourists_by_region.png
2. accommodation_comparison_Stavangerregion.png
3. nationality_comparison_Stavangerregion.png
4. seasonality_Stavangerregion.png
2. accommodation_comparison_HaugesundHaugeland.png
3. nationality_comparison_HaugesundHaugeland.png
4. seasonality_HaugesundHaugeland.png
2. accommodation_comparison_Ryfylke.png
3. nationality_comparison_Ryfylke.png
4. seasonality_Ryfylke.png

How to use this data:
1. Analyze trends in tourism across different regions to inform the Business Launch Decision
2. Compare the popularity of hotels vs. camping sites to guide your service offerings
3. Use the total tourist numbers and growth rates to estimate potential market size for your Pricing Strategy
4. Consider seasonal variations in the data to decide on your Operational Model
5. Use the regional comparisons to determine the most promising locations for your business
6. Analyze the nationality comparison to target specific markets and tailor your marketing strategies

Weather Data Analysis

Weather Data Analysis (2014-2024):
==========
Average Temperature: 8.6°C
Average Max Temperature: 11.6°C
Average Min Temperature: 5.7°C
Total Precipitation: 9402.2 mm
Average Monthly Precipitation: 104.5 mm

Hottest month: July 2018 with max temperature of 21.5°C
Coldest month: February 2021 with min temperature of -4.7°C
Rainiest month: September 2018 with precipitation of 245.7 mm

Weather plot generated: weather_plot.png

How to use this data:
1. Analyze seasonal weather patterns to inform the Operational Model decision
2. Use temperature and precipitation data for Demand Forecasting
3. Consider weather conditions when deciding on Campervan Types
4. Use weather data to estimate potential impact on Customer Satisfaction

Social Media Sentiment Analysis

Error running analyze_social_media.py: Traceback (most recent call last):
  File "/Users/liseeiane/code/UiS/MOD500/project/analyze_social_media.py", line 34, in fetch_tweets
    fetched_tweets = api.search_tweets(q=query, count=count, lang="en", tweet_mode="extended")
  File "/Library/Frameworks/Python.framework/Versions/3.9/lib/python3.9/site-packages/tweepy/api.py", line 33, in wrapper
    return method(*args, **kwargs)
  File "/Library/Frameworks/Python.framework/Versions/3.9/lib/python3.9/site-packages/tweepy/api.py", line 46, in wrapper
    return method(*args, **kwargs)
  File "/Library/Frameworks/Python.framework/Versions/3.9/lib/python3.9/site-packages/tweepy/api.py", line 1146, in search_tweets
    return self.request(
  File "/Library/Frameworks/Python.framework/Versions/3.9/lib/python3.9/site-packages/tweepy/api.py", line 271, in request
    raise Forbidden(resp)
tweepy.errors.Forbidden: 403 Forbidden
453 - You currently have access to a subset of Twitter API v2 endpoints and limited v1.1 endpoints (e.g. media post, oauth) only. If you need access to this endpoint, you may need a different access level. You can learn more here: https://developer.twitter.com/en/portal/product

During handling of the above exception, another exception occurred:

Traceback (most recent call last):
  File "/Users/liseeiane/code/UiS/MOD500/project/analyze_social_media.py", line 83, in <module>
    tweets = fetch_tweets(query, count=100)

```
  File "/Users/liseeiane/code/UiS/MOD500/project/analyze_social_media.py", line 42, in fetch_tweets
    except tweepy.TweepError as e:
AttributeError: module 'tweepy' has no attribute 'TweepError'
```

Financial Analysis

Net Present Value (NPV): $-120921.32
Internal Rate of Return (IRR): Could not be calculated

Financial projection plot saved as 'cumulative_cash_flows.png'

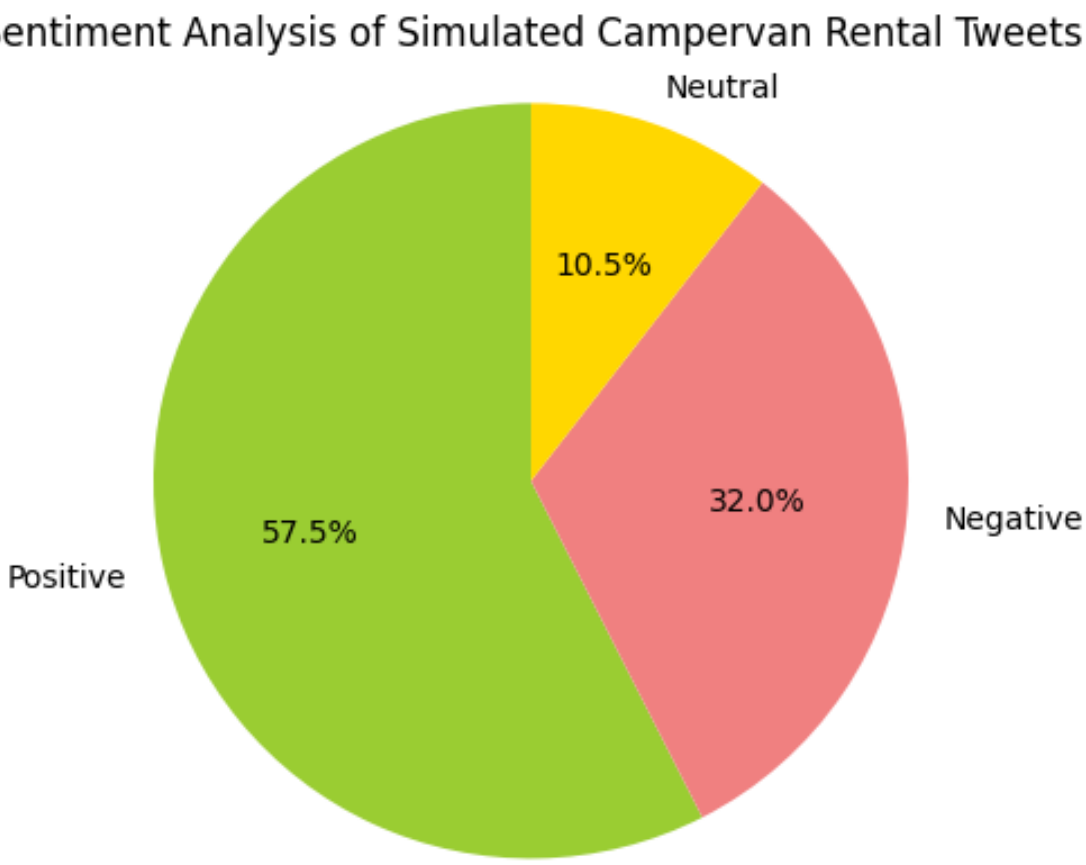
How to use this data:
1. Use NPV to assess the overall profitability of the venture
2. Compare IRR with the company's required rate of return to make the Business Launch Decision
3. Analyze the cumulative cash flow plot to understand the payback period
4. Adjust inputs (initial investment, revenue, costs) to compare different scenarios for Fleet Size and Pricing Strategy

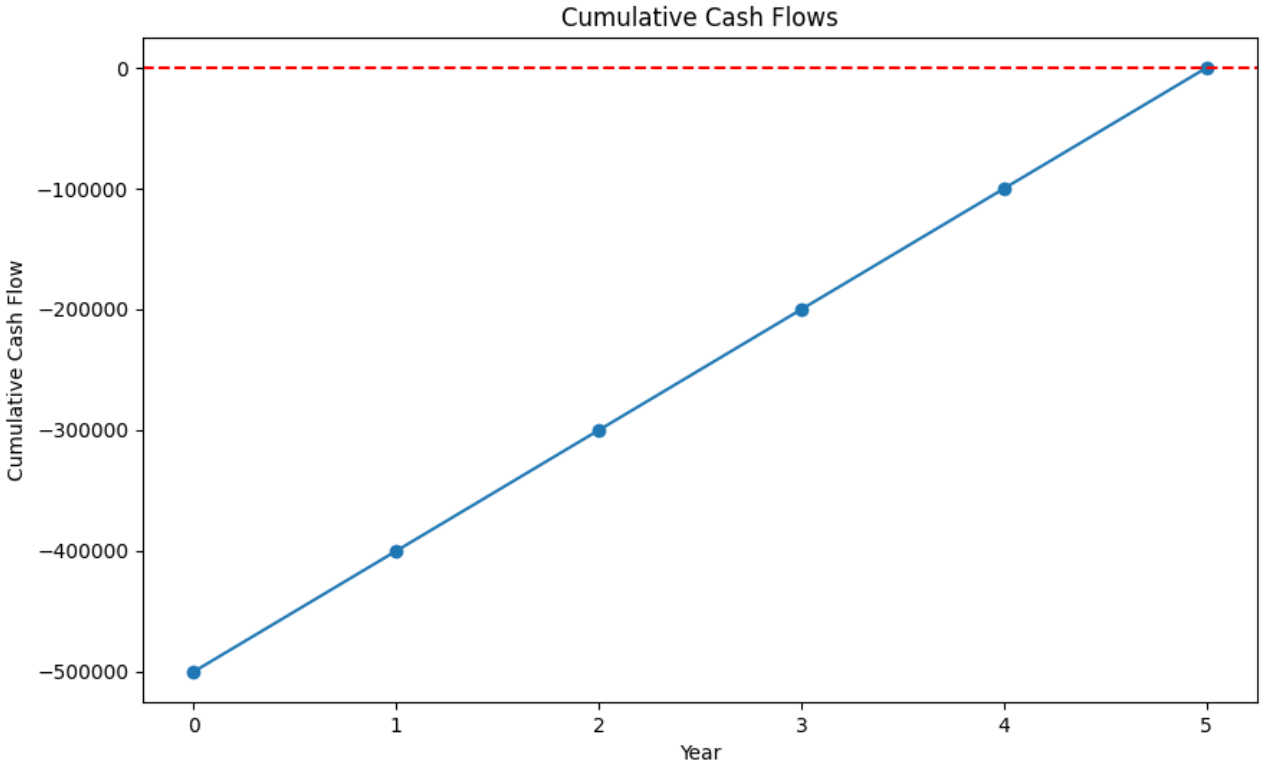
Performing sensitivity analysis...
Sensitivity analysis plot saved as 'npv_sensitivity.png'
Use the sensitivity analysis to understand how changes in revenue affect the project's NPV

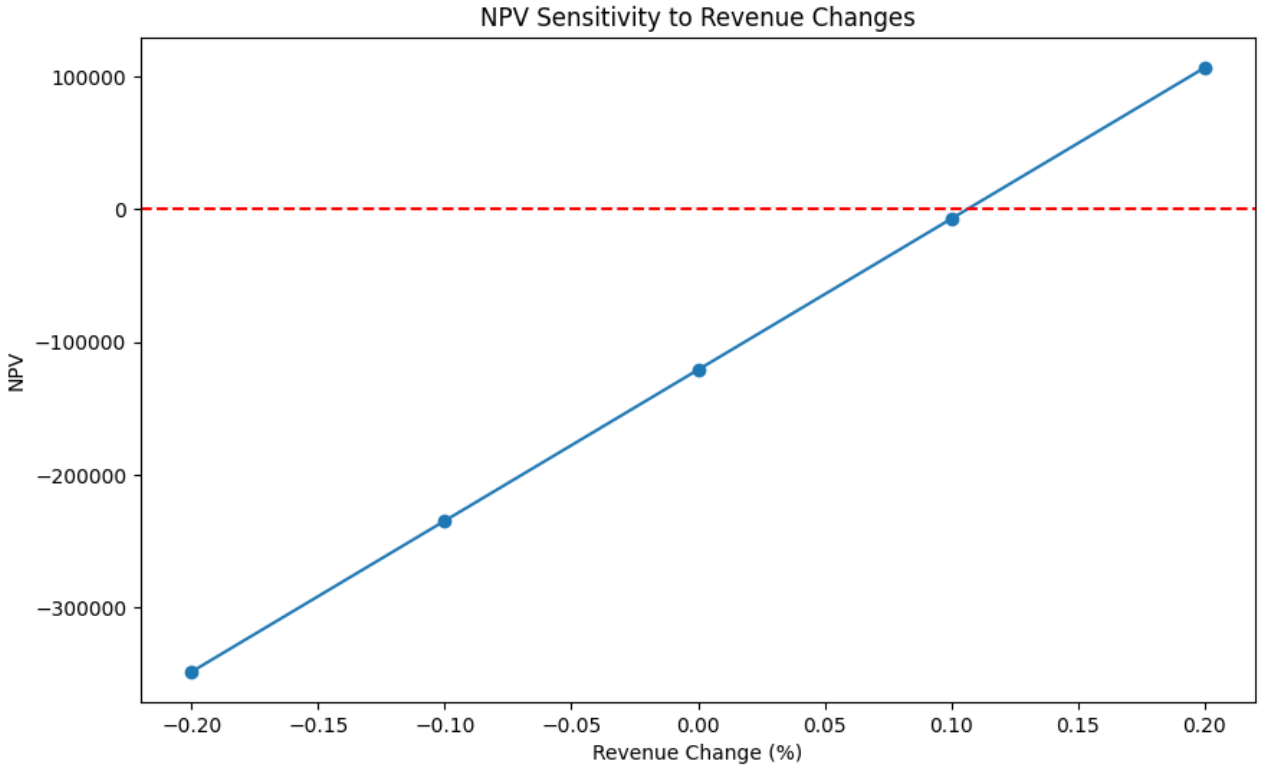
Image tourism_data_plot.png not found

Image temperature_plot.png not found

Image precipitation_plot.png not found


Sentiment Analysis of Simulated Campervan Rental Tweets
Neutral
10.5%
32.0%
Negative
57.5%
Positive


Cumulative Cash Flows
Cumulative Cash Flow
0
−100000
−200000
−300000
−400000
−500000
0
1
2
3
4
5
Year


NPV Sensitivity to Revenue Changes
100000
0
−100000
−200000
−300000
NPV
−0.20
−0.15
−0.10
−0.05
0.00
0.05
0.10
0.15
0.20
Revenue Change (%)