

Data Analyst - Antarctica Global

DATA CLEANING

- Load and explore the dataset.
- Check for missing values, data types, and outliers.
- Provide a summary of the dataset statistics and any initial observations.

SUBMISSION

You should submit a **report** in a **PDF format** - no longer than 4 pages - at the following address: anna@antarcticaglobal.com

The report should include:

1. Answers to the following questions:

- Lead Generation Efficiency: Calculate the lead generation efficiency for each associate as the ratio of total leads generated to the total time spent on lead generation. Which associate has the highest efficiency?
- Daily Performance Variability: Determine the standard deviation of the daily number of leads generated by each associate. Which associate shows the highest variability in daily performance?
- Time Management Analysis: Analyze the relationship between the average time per lead and the total number of leads generated per day for each associate. Is there a significant correlation?
- Compare the average number of leads generated on days when daily team reviews were attended versus missed for each associate. What is the percentage difference in performance?
- Incomplete Leads Reduction Over Time: Calculate the trend (using a linear regression model) of the number of incomplete leads over time for each associate. Are there any significant improvements or deteriorations?
- Performance Consistency: Calculate the coefficient of variation (CV) for the daily leads generated by each associate. Which associate has the most consistent performance?
- High-Performance Days: Identify the top 10% of days with the highest lead generation for each associate. What is the average time spent on lead generation during these high-performance days?
- Impact of Longer Lead Generation Time: Determine if there is a threshold in the time spent on lead generation beyond which the number of leads generated significantly increases. What is the optimal time spent on lead generation for maximizing leads?

- Comparative Day Analysis: Calculate the average leads generated on weekdays versus weekends for each associate. Are there any notable differences in performance based on the day of the week?
- Predictive Analysis: Using a simple linear regression model, predict the number of leads each associate is expected to generate based on their time spent on lead generation. How accurate is the model when compared to actual data?

2. Dashboarding

Create a clear, beautiful, concise and static dashboard that provides a comprehensive overview of the associates' performance based on the provided dataset, including:

- Performance Trend with Attendance: Create a line chart showing the trend of daily leads generated for days with attended versus missed team reviews for each associate.
- Time vs. Leads Heatmap: Create a heatmap showing the relationship between the time spent on lead generation and the number of leads generated for each associate.
- Monthly Performance Comparison: Create a bar chart comparing the total leads generated by each associate on a monthly basis.
- Daily Incomplete Leads Trend: Create a line chart showing the daily trend of incomplete leads for each associate.
- Time Distribution Analysis: Create a box plot to analyze the distribution of time spent on lead generation activities for each associate.
- Highlight any significant trends or patterns and use appropriate visualizations like bar charts or scatter plots to illustrate efficiency.

Ensure the dashboard is well-organized and visually appealing. Your analysis should be well-documented and easy to follow.

You are free to use any software for your data analysis, such as Google Sheets or PowerBI. You will provide in Appendix the code (if used) along with comments. Python is acceptable, but the python packages used and the code for the analysis and visualization needs to be clearly stated along with comments explaining the code. Same goes for any other programming language.

3. Recommendations:

Based on your analysis, provide recommendations for the Business Development Team. These recommendations should be data-driven and aimed at improving team performance. Suggest specific actions or strategies that can help employees improve their performance.



There is so much we can do together to make this world a better place ready to show us your worth?

So tell me, are you

I'm quite excited to look at your assignment. **You have 1 week to complete this assignment from the**



data of receiving this email.

I'll happily give you more details about the following hiring stage once you pass this assignment. There won't be any further information provided for this assignment. Every candidate receives the same amount of information.