

Gulf Bank Datathon 2022

Data Visualization Track Challenges

Answer business questions by using **Tableau**.

Setup:

You will be using a retail banking dataset found on data.world, download it from [here](#) and set up your project.

Luxury Loan Portfolio Path:

Context

You are a financial analyst at Eagle National Bank. Your manager assigned you this loan portfolio to evaluate. You will share your findings with a few general Managers.

Business Questions:

- How is our bank's luxury loan portfolio performing?
 - Right now?
 - Overtime?
 - Compared to last year?
- How is it performing relative to the 10 year index?
- How many loans are behind on payments/at risk of default?

Key Metrics:

- Number of loans
- Number of active loans(ALs)
- Average interest rate
- Annual percentage rate (APR)
- Property Value to Funded Amount (PVFA)
- Average Loan Tenure
- Average Loan Value
- Total Property Value(TPV)
- Median Loan Value(MLV)

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Level 1: Loan Portfolio profiling (1 point per task)

- What is the total number of loans?
- What is the total number of clients?
- What is the average loan tenure?
- What is the median loan value?
- What is the ratio of Property Value to Funded Amount?
- Show the breakdown of loans by purpose
- Where are the properties concentrated? Generate a geomap.

Level 2: Performance overtime (3 point per task)

- Of the total loans, how many are still active? How many are inactive? (NOTE: assume that we are in 2015, not 2022)
- What is the median loan value for the portfolio overtime? Show and compare it to the the mean
- Show the trend of interest rates and 10 year treasury index overtime. Highlight any notable points
- Plot the average APR (annual percentage rate) by purpose of loan/product

Level 3: Dashboards and Story

- Overview tab: This tab is a dashboard which contains an executive summary using answers from the previous levels. **(5 points)**
- Other tab(s) contain drilldowns/details: Create other dashboards that use your storytelling skills to dive deep and bring together the visualizations that you've created. Make sure it's interactive. **(10 points)**

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CRM Path

Context

You are an analyst with the complaints department. You are tasked with summarizing the CRM data, and assessing how effectively the bank has been handling customer reported issues. You aim to understand the bank's strong points as well as any weak points in the customer experience(cx) that the bank provides.

Business Questions

- Who is most likely to be calling us ?
- How effective are our call centers at handling customer calls?
- Are certain regions facing more complaints?/underperforming?
- Are most calls caused by disputes? If so, what products/services are driving these calls?
- What can we monitor?
- How do most of our clients engage with us?

Key Metrics

Total incoming calls

Total Transactions

Average wait time

Average time to resolution

Daily incoming calls

% Repeat callers

% Resolved

% Resolved at no cost

Level 1: Profile & Clients (1 point per task)

- How many total clients?
- What is the total number of transactions generated by our clients?
- What is the total number of accounts?
- What is the ratio of accounts to transactions?
- Demographic distribution of our clients:
 - Age
 - Sex



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- Regions

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Level 2: Profile the calls & Tickets (3 point per task)

Calls:

- What is the number of total incoming calls?
- What is the ratio of calls to clients?
- What is the average number of calls?
- What percentage of calls are disputes?
- What percentage of calls are priority calls?
- What % of callers are repeat callers?
- What is the average time to resolution?
- What is the ratio of calls to resolutions?
- Breakdown the calls by call reason. Allow comparisons by call durations, wait times, and time to resolution.

Tickets:

- What percentage of disputes are resolved?
- What percentage of resolutions incur costs?
- What percentage of resolutions are free?
- Time to resolution
- Highlight the ticket distribution
 - Channel type
 - State
 - Resolution type
- What is the average time to resolution ?
- Highlight the ticket distribution by channel type
- Breakdown the ticket resolutions by resolution type
 - Show what the ticket resolution looks like across states.

Level 3: Dashboards and Story

- Overview tab: This tab is a dashboard which contains an executive summary using answers from the previous levels. **(5 points)**
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