

Takaful Data Analysis

DASHBOARD & EDA (PYTHON)
QAISAR ALI SHAH

Dear Sir,

Assalam O Alaikum

The following is walkthrough of dashboards (Total 4) for the Takaful dataset assignment. Other than this, I have also performed some EDA in python.

Problem: What are the healthy and unhealthy payment patterns in Takaful policies?

Dashboards

- Executive Summary
- Payment Patterns
- Customer Analysis
- Additional Drilldown

You can find the filters (more than 8) and score cards on every dashboard.

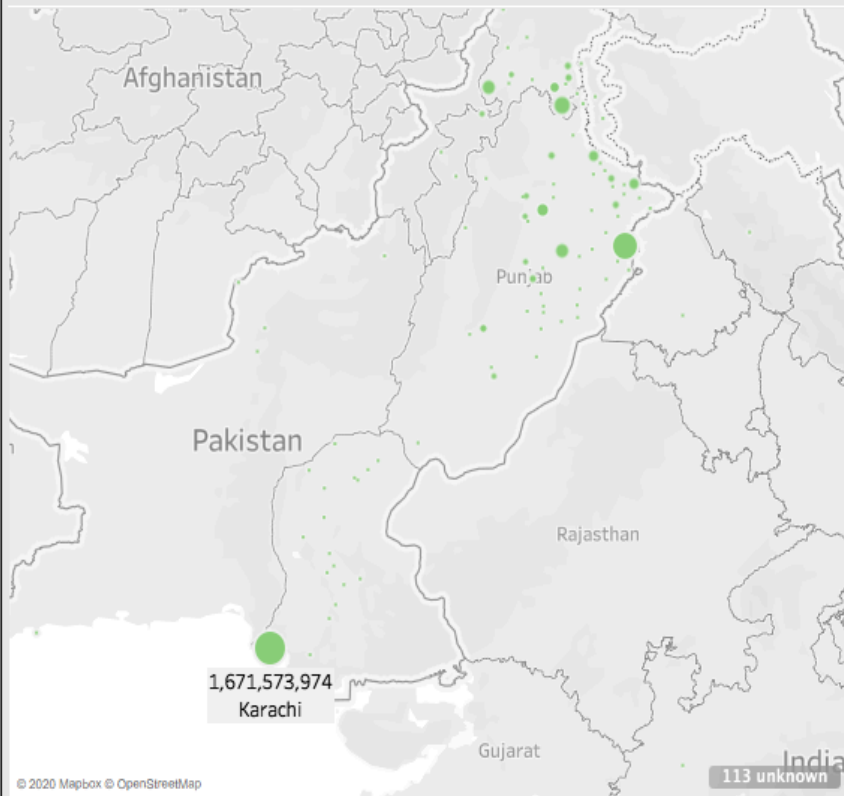
Python EDA (attached separately)

- Categorical variable analysis
- Numerical Variable Analysis
- Binning/Grouping variables
 - New columns added
- Missing Values
- Correlation
 - Heatmap
 - Scatter Plot

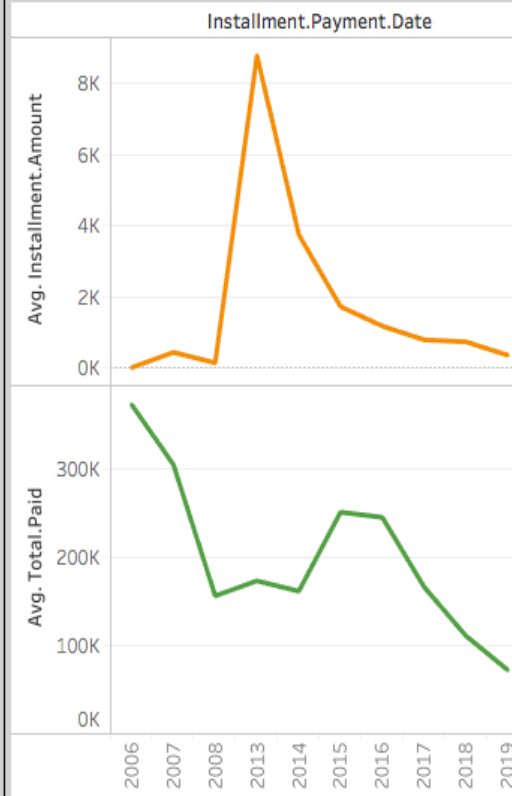
Executive Summary - Takaaful

Agent	City	Installment Year	BasicPlan	Age Group	Weight	PaymentType	Policy.Since (Year)
(All)	(All)	(All)	(All)	(All)	(All)	(All)	0 20
Total Paid		Unique Policies		Avg Installment			
7,799,396,917		57,019		761.7			

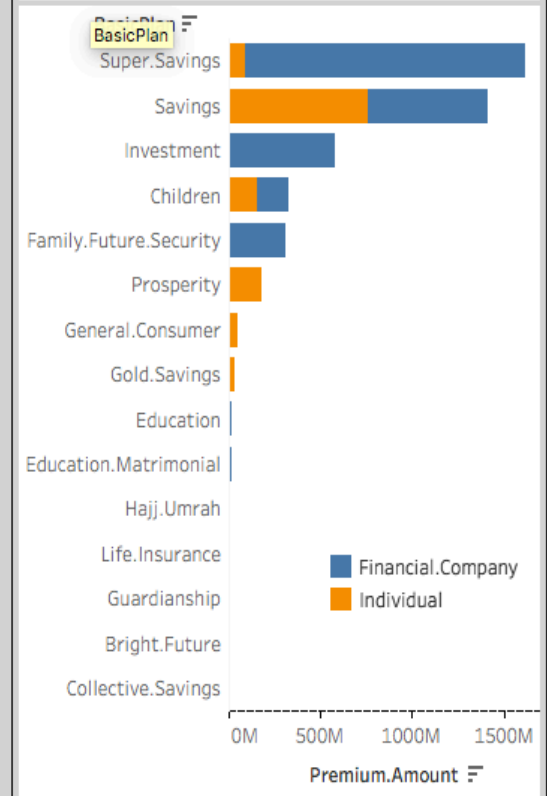
Geographical Patterns



Payment Patterns



Plans of Insurance

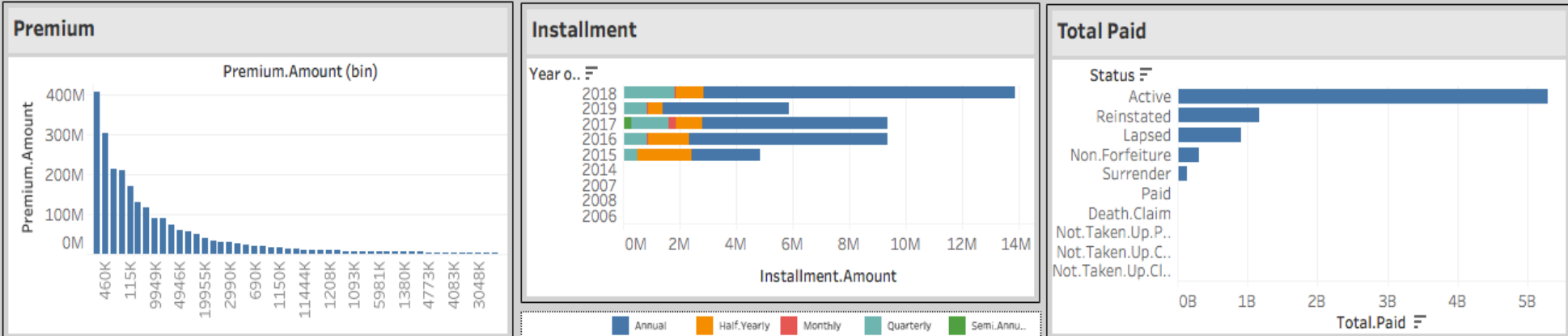
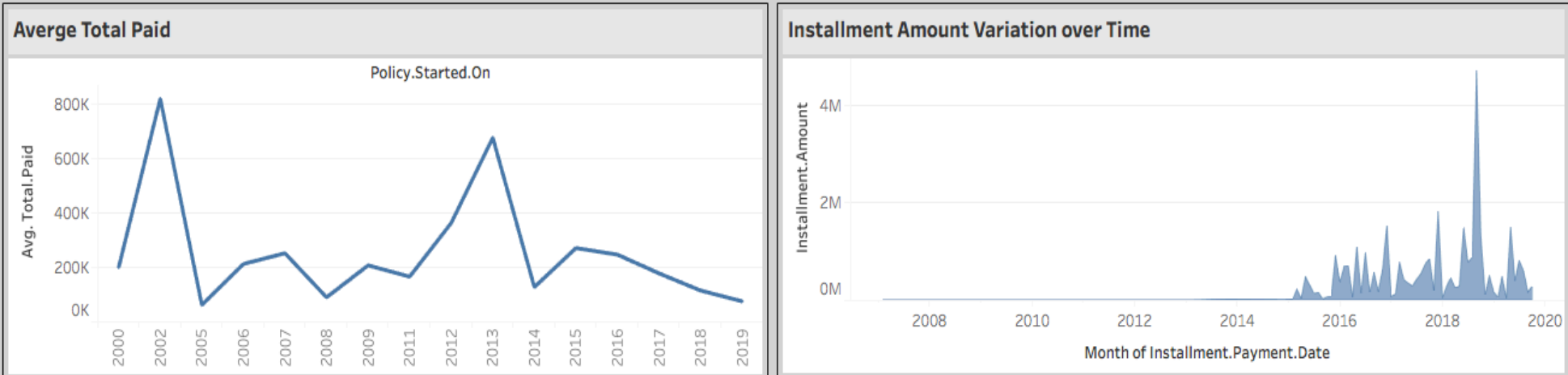


- There has been a spike in payments in 2013, followed by a consistent down-curve
- Customers from Karachi and a few other urban structured cities are outperforming others in total payments.
- Best plans of insurance have been “super saving” and “savings” plan.
- “Financial Company” agents have brought the highest sales.

Payment Patterns - Takaaful

Premium.Amount (gr..	Total.Paid (group)	Installment.Amount (..	Year of Installment	PaymentType	City	Status	Mode	Policy.Since (Year)
Above 100K	(All)	(All)	(All)	(All)	(All)	(All)	(All)	0 20

Total Paid	Unique Policies	Avg Installment
7,799,396,917	57,019	761.7



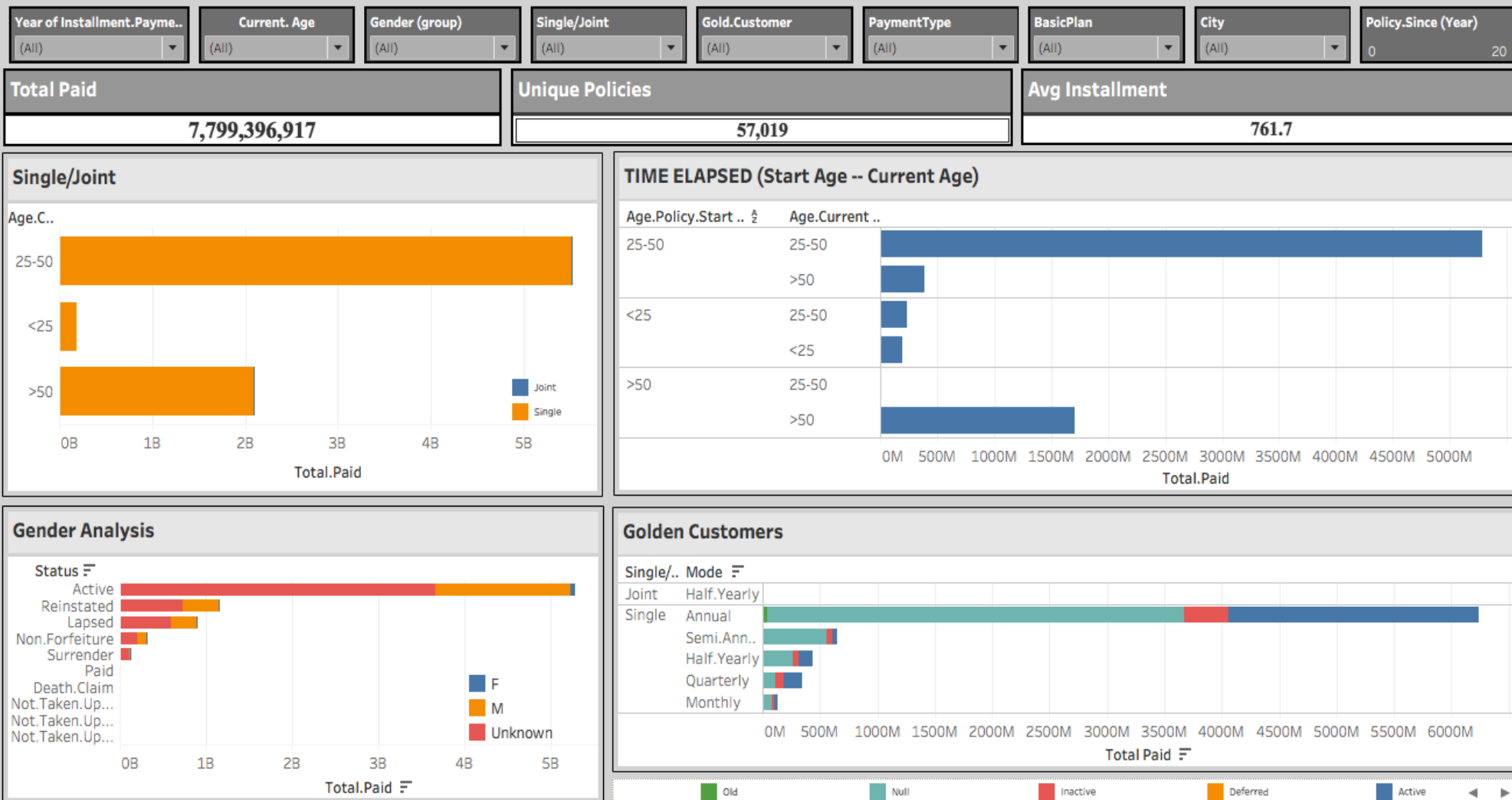
- People who have taken “Annual” policies are making timely payments compared to others who have taken “half yearly” etc.
- The premium amount distribution shows a right-skewedness
- Active customers are bringing in more money, only few “Death Claims” and “Surrender” status of policies.

Customer Analysis - Takaaful



- Healthy payments by customers who have had the policy for only a few years (0-5 years).
- People making more payments have shown to have less than 4 assets mostly
- Choice of agent for healthy payments remains "Financial Company"

Additional Drilldown - Takaaful



- Time elapsed here tells that customers who aged 25-50 when buying a policy(start.Age), are currently aging between 25-50 and making healthy paymnets.
- “Single” policy customers are making hefty amount of payments
- Most payments are bought by “Male” however the “unknown” group holds the highest number. My assumption is males have more policies.
- Golden customers fall mostly in the “Null” category, followed secondly by “Active” in the policy group.