Vanguard

Clemens & Timo

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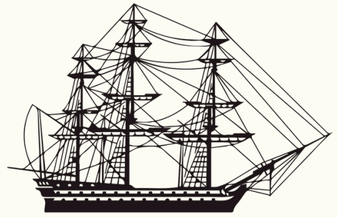
Ironhack Data Analyst Bootcamp

Content

1. Introduction: Vanguard & Task
2. Data Set Description & Cleaning
3. EDA: Demographic Client Analyses
4. Key Performance Indicators
5. Hypothesis Testing
6. Experiment Evaluation
7. Tableau Visualization: Dashboard
8. Teamwork & Project Management
9. Challenges & Learnings
10. Key Findings & Conclusions

Introduction

Data Overview



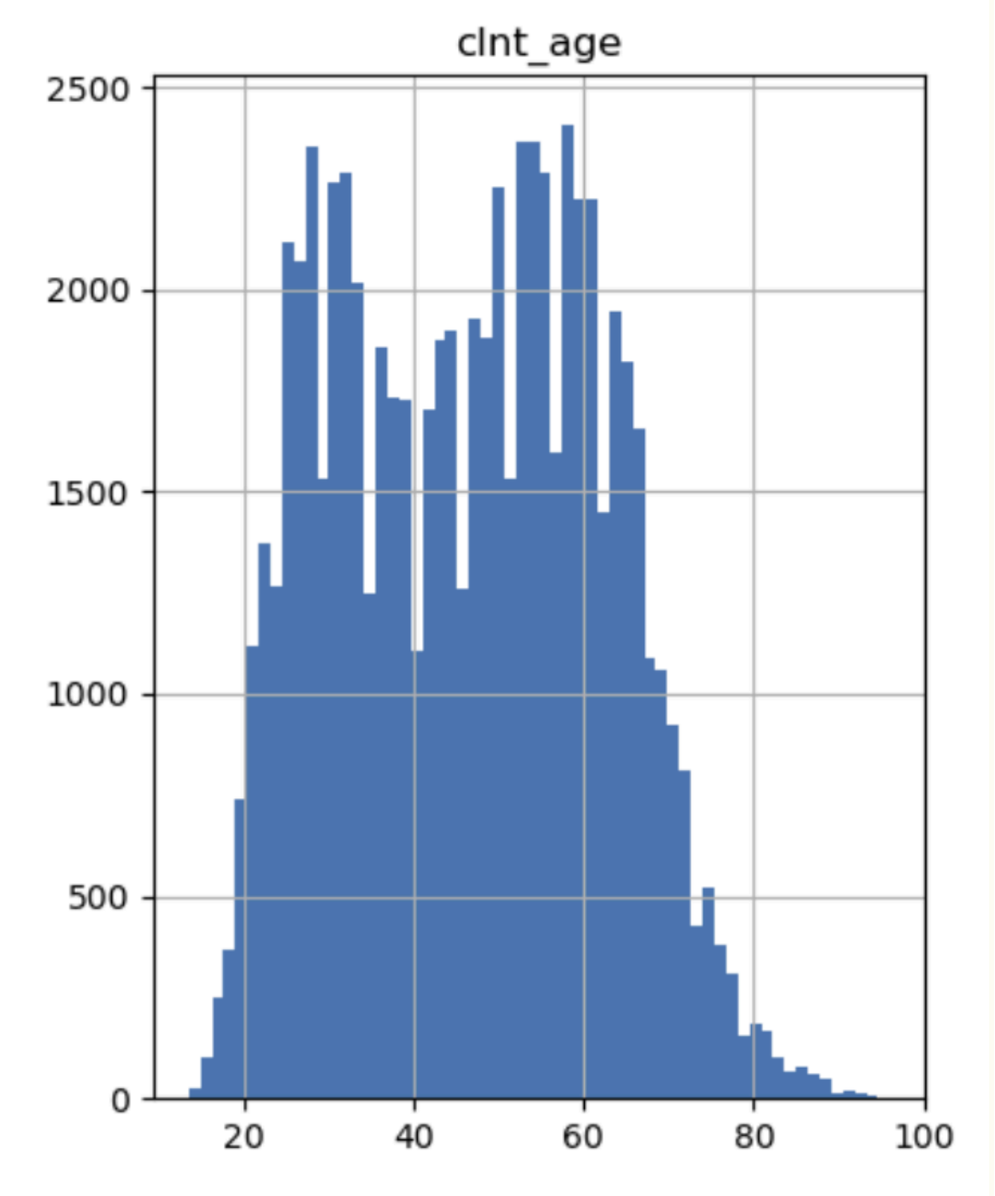
Vanguard®

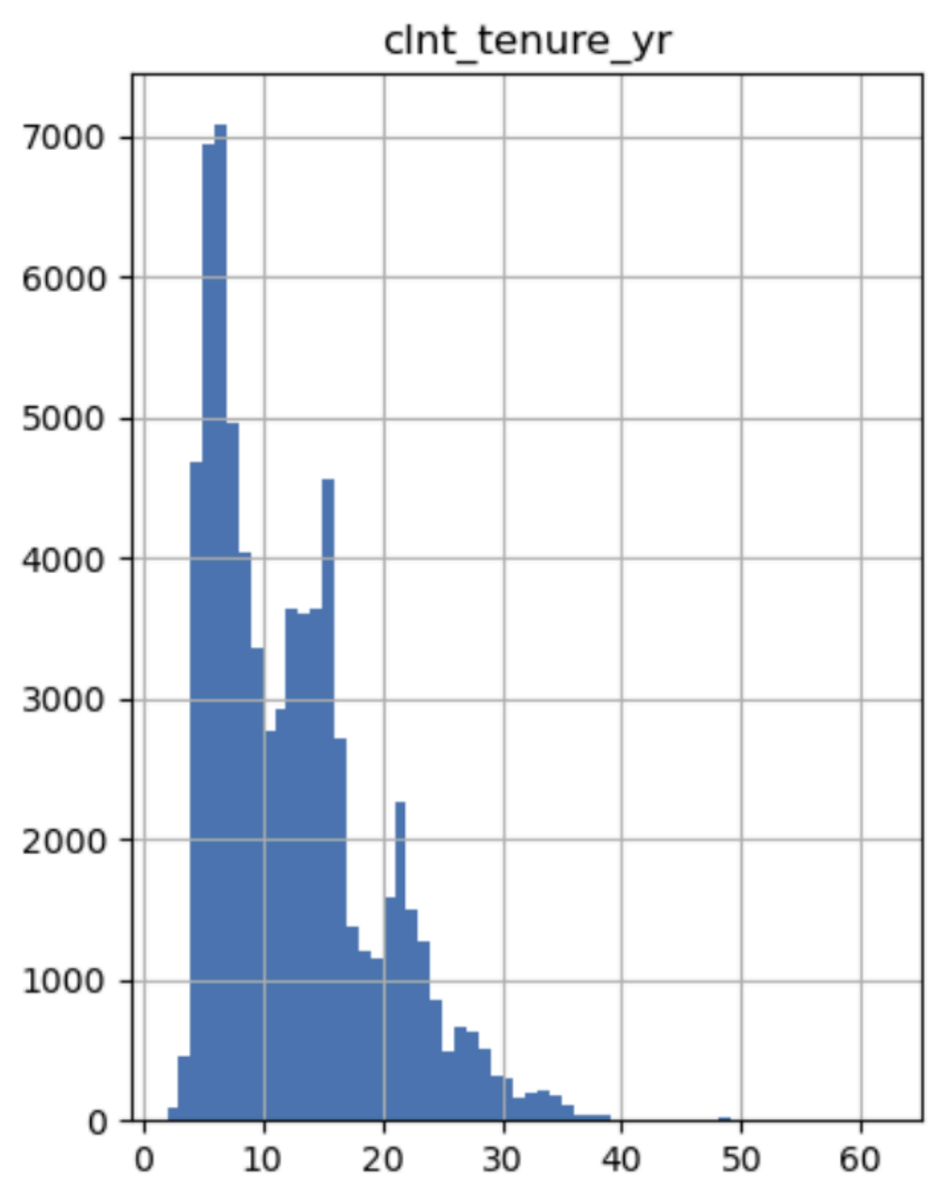
- Who: df_final_demo
- How : df_final_web
- Experiment design: df_final_experiment

data cleaning and merging process:

- Cleaning: calculated the time taken per step
- Merged all data into one big DataFrame for easy import into Tableau

EDA: demographic client analyses





age categories:

1st peak at 30 years

2nd peak at 55 years

tenure categories:

1st peak at 6.5 years

2nd peak at 16 years

Key Performance Indicators process steps:

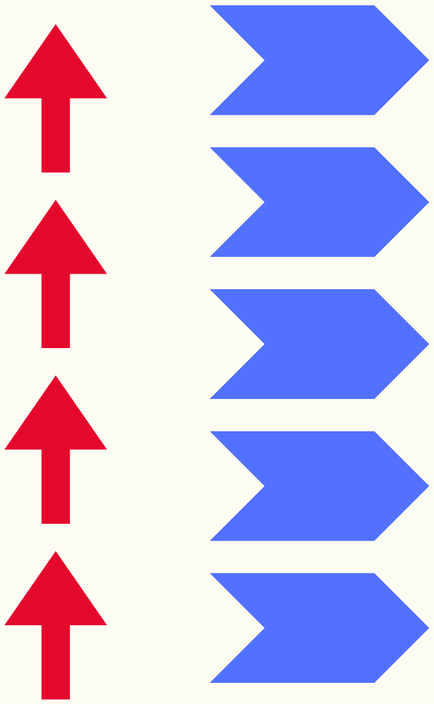
start (0)

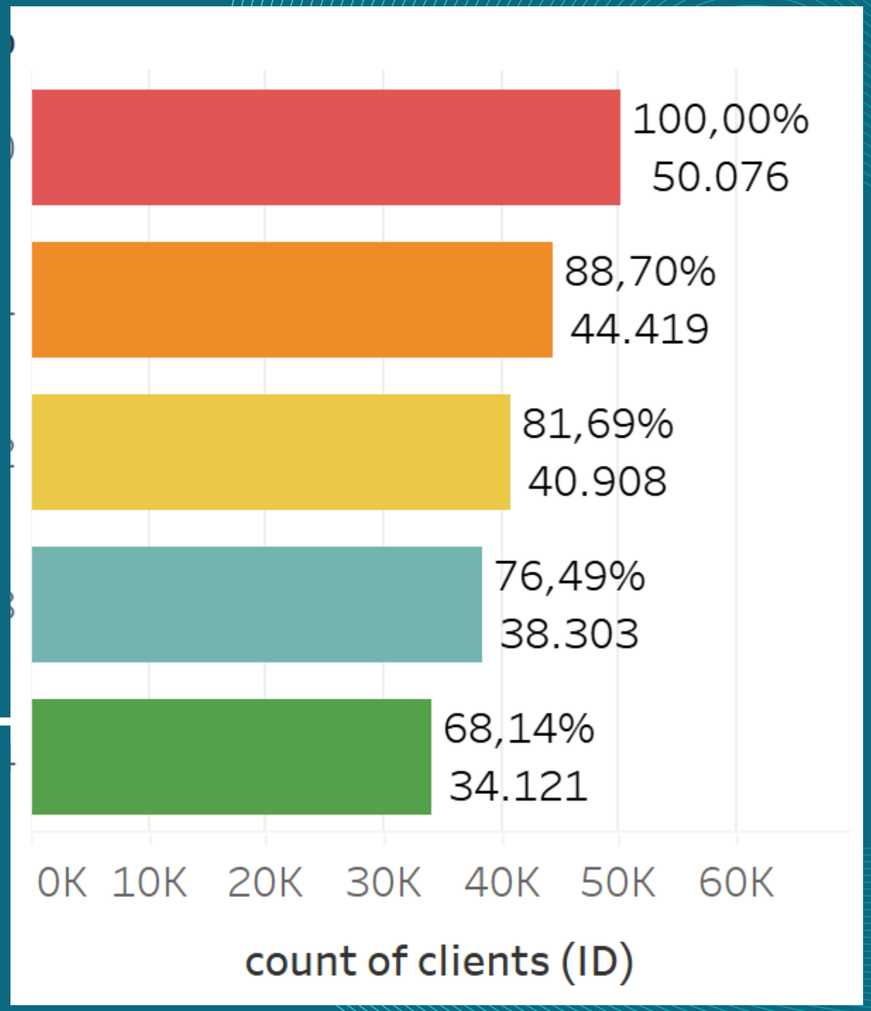
step_1

step_2

step_3

confirm (4)





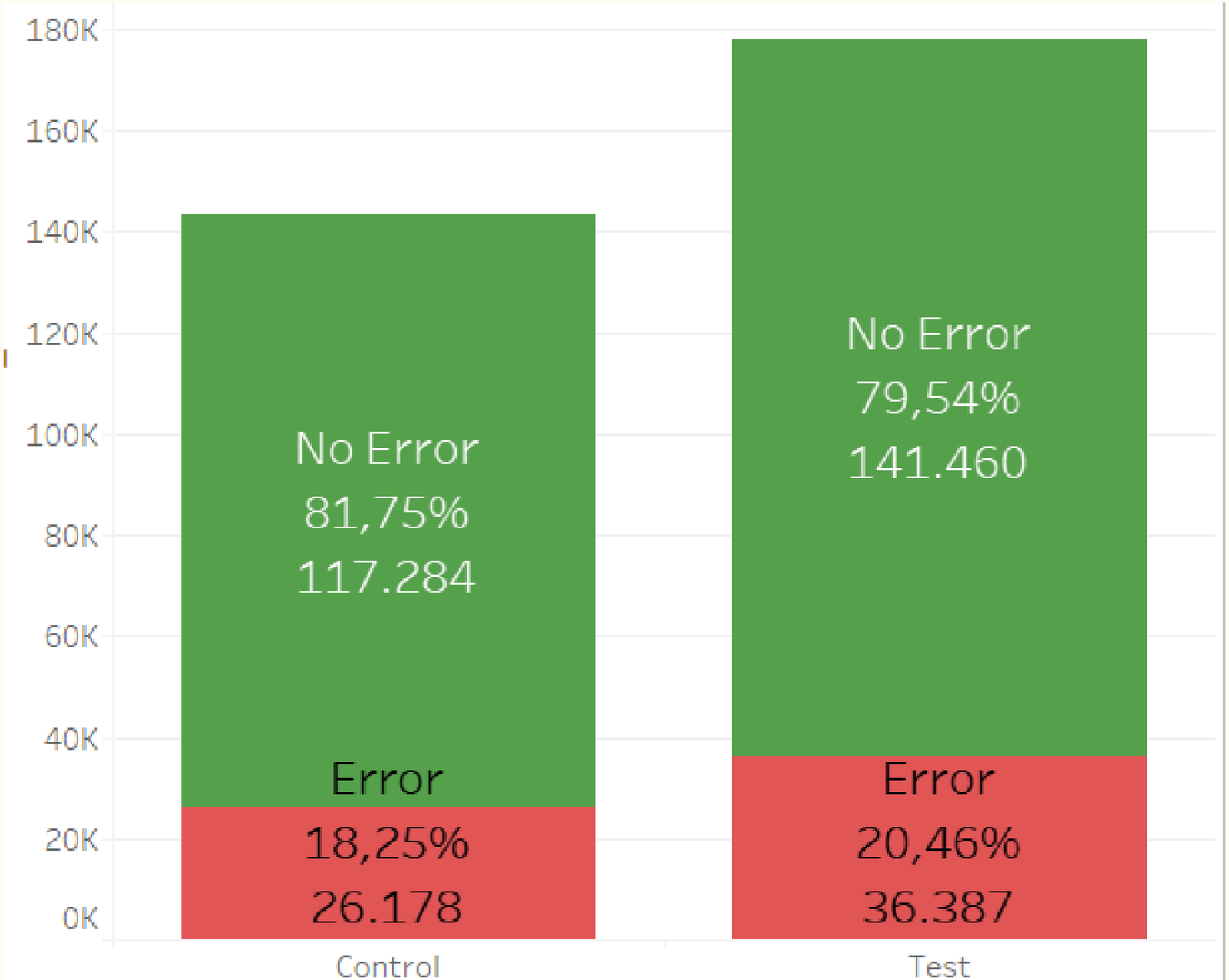
Key Performance Indicators

Completion rate control group: 65.97 %

Completion rate test group: 70.04%

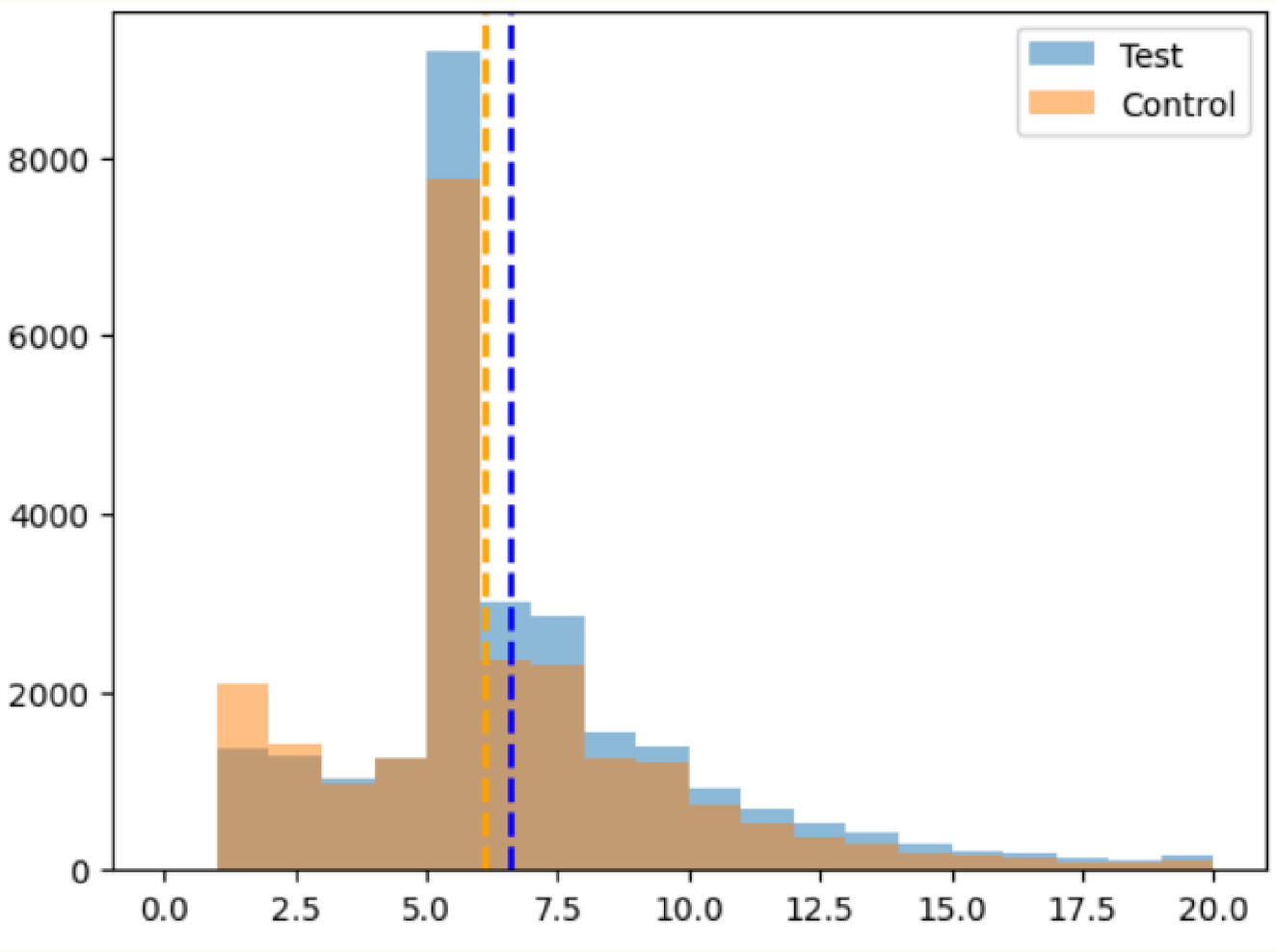
- 4% more of processes were completed
- Z-Test p-value near zero.
- With effectiveness threshhold (5%) Z-Test p-value goes up to 0.96.

KPI: Error Rate



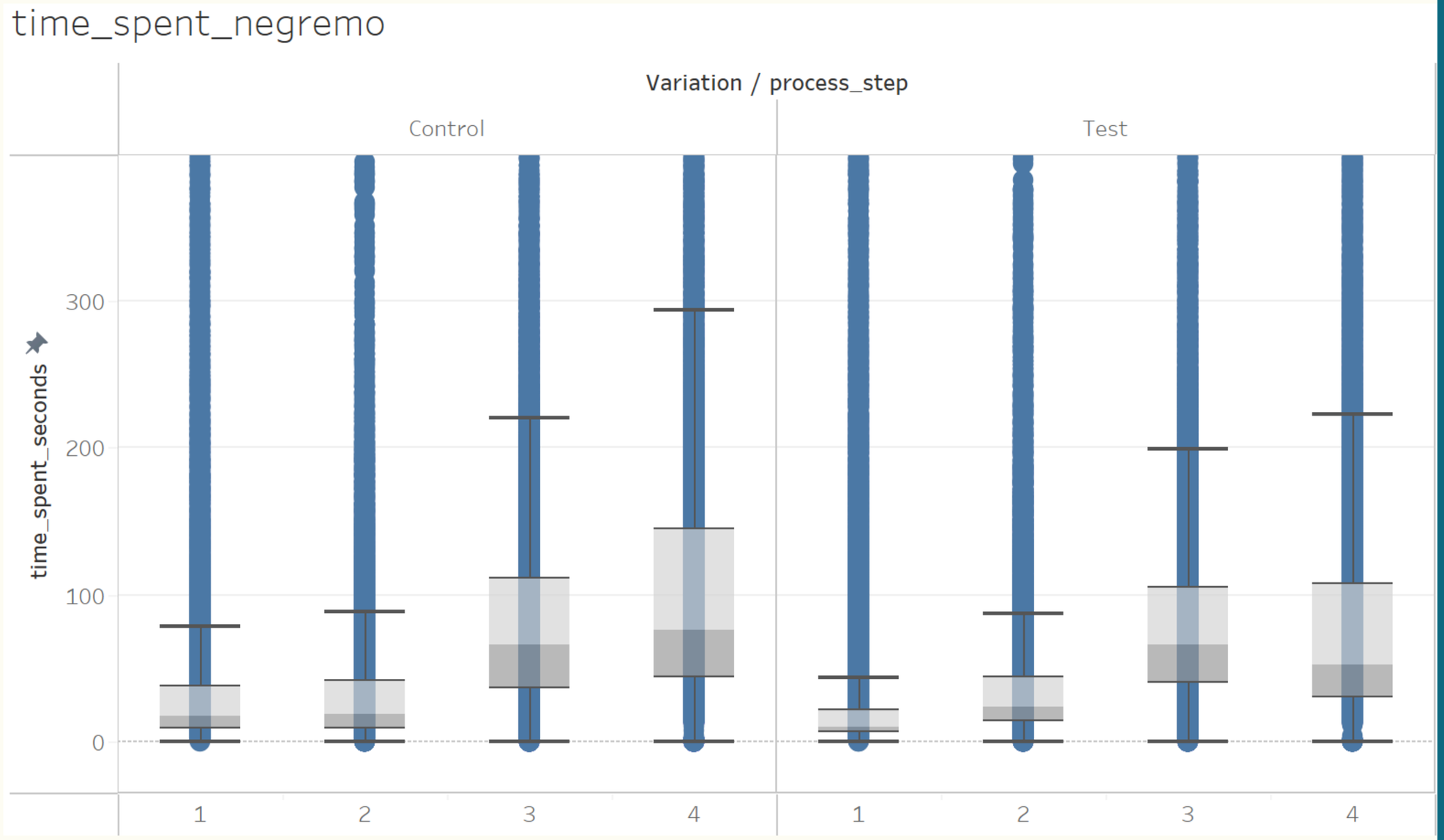
- Slightly higher Error Rate 20.46% vs. 18.25%
- Z-Test confirmed this as a significant difference.
- (H0: no difference between control and test groups can be dropped)

KPI: Average number of steps per client



- Mann-Whitney U Test: Because the values aren’t normally distributed
- P-value: 8.7e-38
- Control mean: 6.1
- Test mean: 6.6

KPI: time spent per process step

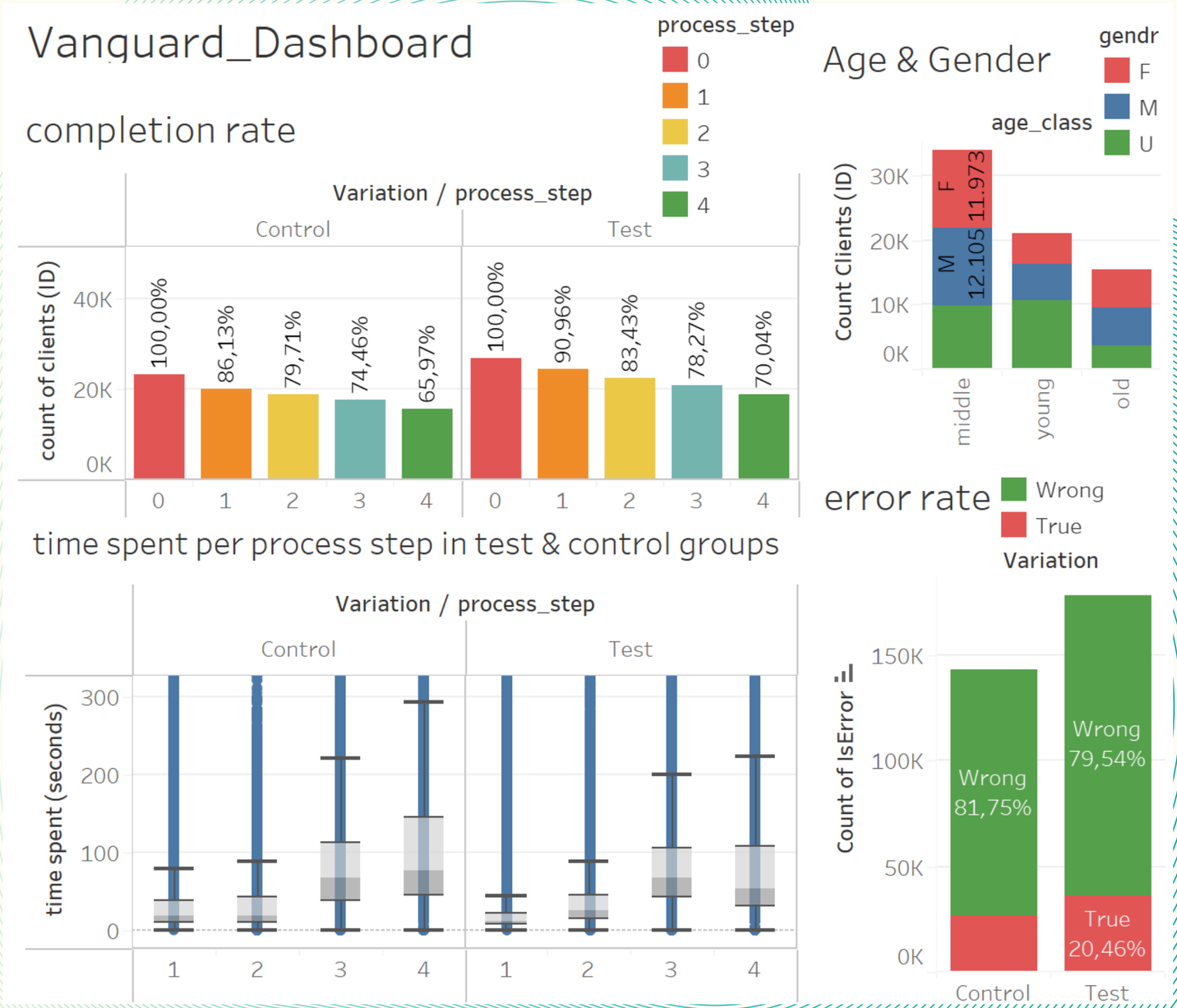


time spent on each process step is increasing with process step number

test group completes process steps faster than control group

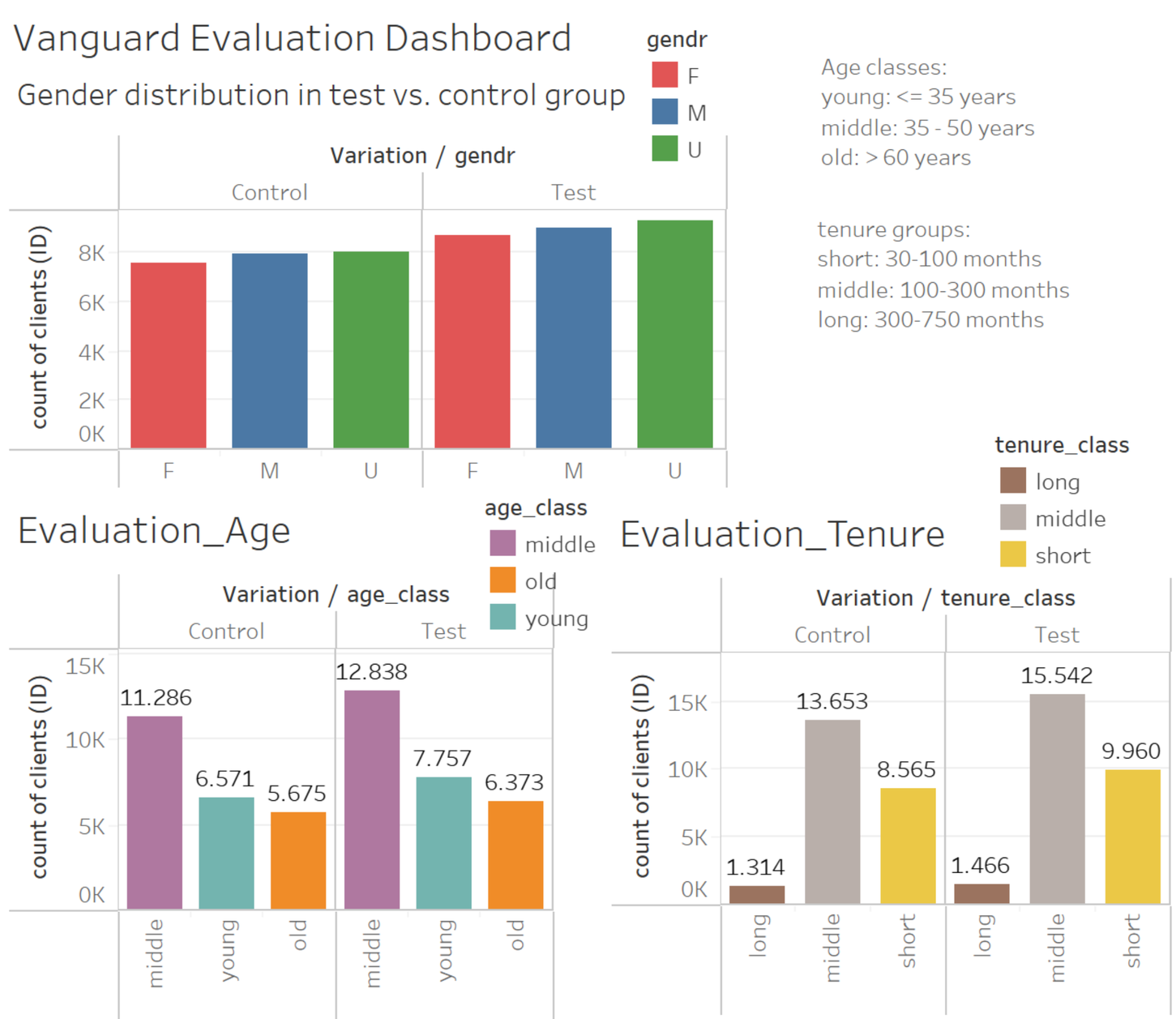
Tableau Visualization: interactive dashboard

interactive dashboard on Vanguard demographic data generated and can be demonstrated



https://public.tableau.com/views/Vanguard_Clemens_Timo/Vanguard_Dashboard?:language=de-DE&publish=yes&:sid=&:redirect=auth&:display_count=n&:origin=viz_share_link

Vanguard Experiment Evaluation Dashboard in Tableau



Experiment duration: 3 months

https://public.tableau.com/views/Vanguard_Evaluation_Clemens_Timo/Evaluation_Dashboard?:language=de-DE&publish=yes&:sid=&:redirect=auth&:display_count=n&:origin=viz_share_link

Teamwork & Project Management

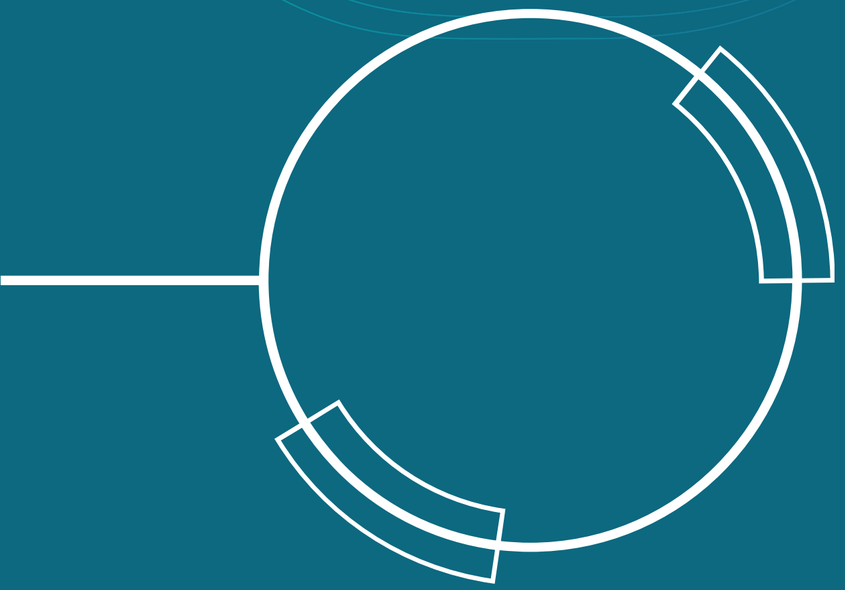
all tasks were split between us:

- data cleaning, KPI analysis, statistical analysis, tableau visualization, presentation preparation.

collaboration and project management strategies:

- Canva as project management tool
- GitHub as data transfer tool

Challenges & Learnings



Challenges:

- data import to tableau
- learning to use tableau

Learnings:

- tableau can only deliver good insights if the data is high quality
- data cleaning is crucial

KEY FINDINGS

1. Valid data set to answer the question
2. New UI has higher completion rate
3. New UI is speeding up the process
4. error rate is higher in new UI

CONCLUSION

The new digital interface is more effective than the old, however the threshold effectiveness was not achieved

but can still be improved as the error rate has increased.

Thank You !

Clemens & Timo

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