MileApp Data Scientist test

A. Task Completion Analysis

**Task Status Performances**
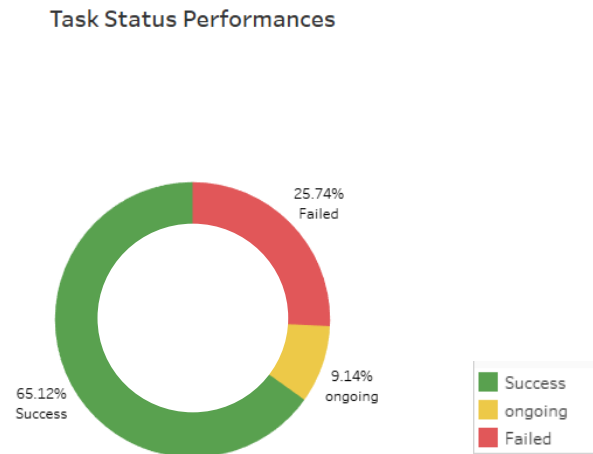
Based on the data provided, we can see that the overall performance of the delivery package history has a **success rate of 65.15%, an ongoing rate of 9.15%, and a failed rate of 25.74%**. These percentages provide us with a broad overview of the delivery performance and suggest that the majority of delivery tasks are successful, while a significant proportion of tasks result in failure.

Insights that can be gleaned from this data include:

- Delivery success rate: The success rate of 65.15% indicates that the majority of delivery tasks are completed successfully. This could suggest that the delivery process is generally effective and efficient, with most packages being delivered on time and in good condition.

Task Status Performances
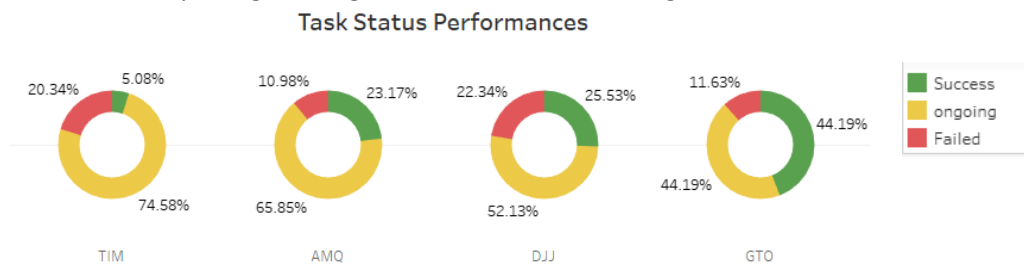
- Ongoing rate: **The ongoing rate of 9.15%** suggests that a **small proportion** of delivery tasks are still in progress. Most of on going task are come from branch destination **TIM, AMQ, DJJ and GTO**. This could be due to a variety of reasons, such as **package rerouting or delays in transit**. It is important to monitor these ongoing tasks to ensure that they are completed successfully. This branches could be indicate that the **branches are need additional supports or resources**

Failed Task Breakdown
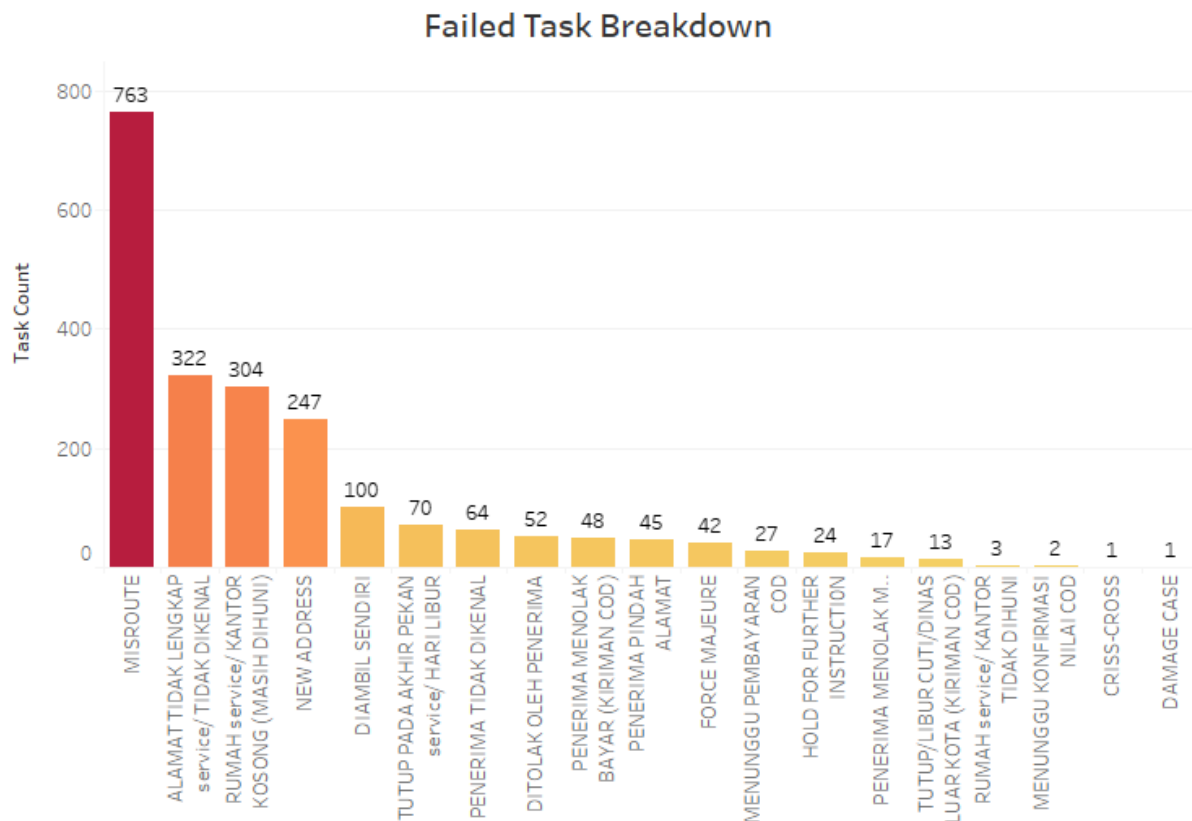
- Failed rate: **The failed rate of 25.74% is relatively high** and suggests that there are significant challenges or issues in the delivery process. Most of issues are contributed from **misroute, incomplete address, customer not home and new address**. these are important to identify the causes of these failures and take steps to address them, such as improving package handling procedures or enhancing security measures.
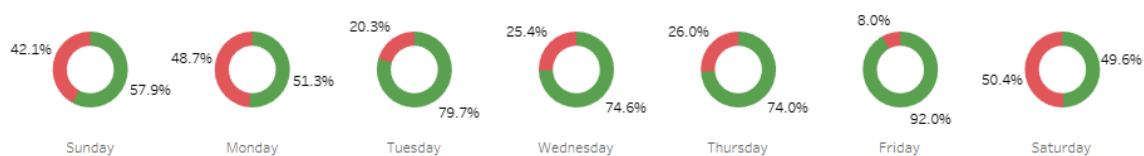

By this chart, we could also conclude that the completion rate is low at the **weekend (Saturday and sunday) and the early week (monday).** It is relatively high received 50% of completion rate. If there are specific issues or delays that cause failed deliveries, make sure to communicate with customers promptly to provide updated information and apologize for the inconvenience. This can help build trust and ensure customers are satisfied with the service even when there are issues.

- Impact on customer satisfaction: The success, ongoing, and failed rates can all have an impact on customer satisfaction levels. Customers who receive their packages successfully and on time are more likely to be satisfied with the delivery service, while those who experience delivery issues or delays are more likely to be dissatisfied. It is important to track customer satisfaction levels and identify areas for improvement in the delivery process.

B. Payment Analysis

Task Payment Method

28.29%
COD

71.71%
Digital Payment
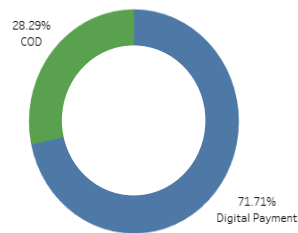
Based on the provided data, we can see that **28.29%** of package payments are made using COD (Cash on Delivery), while **71.7%** are made using digital payment methods.

- **Digital payment dominance**: The fact that **71.7%** of package payments are made using digital payment methods suggests that customers prefer the convenience and security of digital payment options over cash payment options.
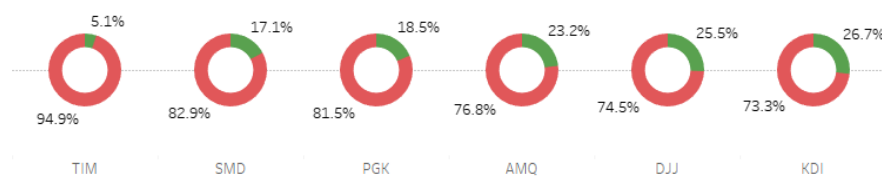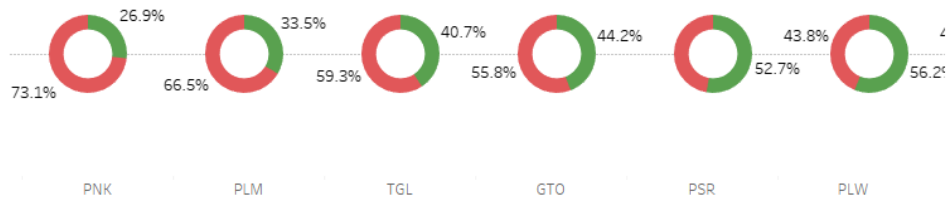
COD Payment Performances

29.47%
COD Received

70.53%
COD Not Received
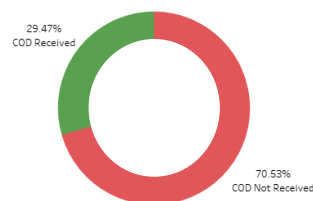
- **Low COD payment success rate**: Most of failed task are contributed by COD Payment, the low COD payment success rate of **29.4%** suggests that there may be issues with the COD payment process. To minimize the risk of failed payment, Ensure that staff members handling COD payments are adequately trained on the payment process and understand how to process COD payments correctly. This can help reduce errors and increase the success rate of COD payments. Make sure that customers are informed about the COD payment process and the amount they will be required to pay. Providing clear and accurate information to customers can help reduce payment errors and increase the success rate of COD payments.
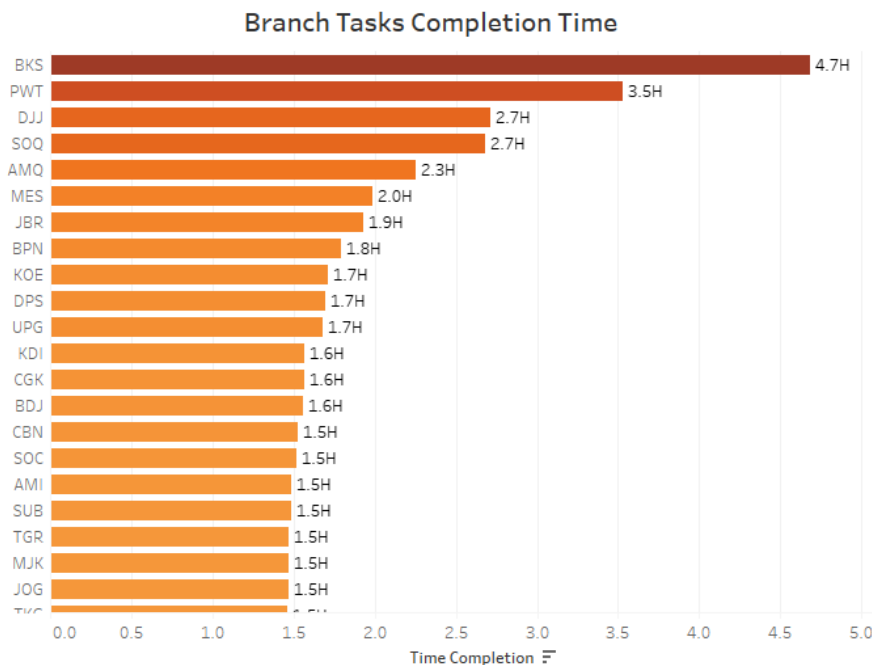
C. Branch Comparison Analysis

Branch Dest Completion Rate

5.1%	17.1%	18.5%	23.2%	25.5%	26.7%
94.9%	82.9%	81.5%	76.8%	74.5%	73.3%
TIM	SMD	PGK	AMQ	DJJ	KDI

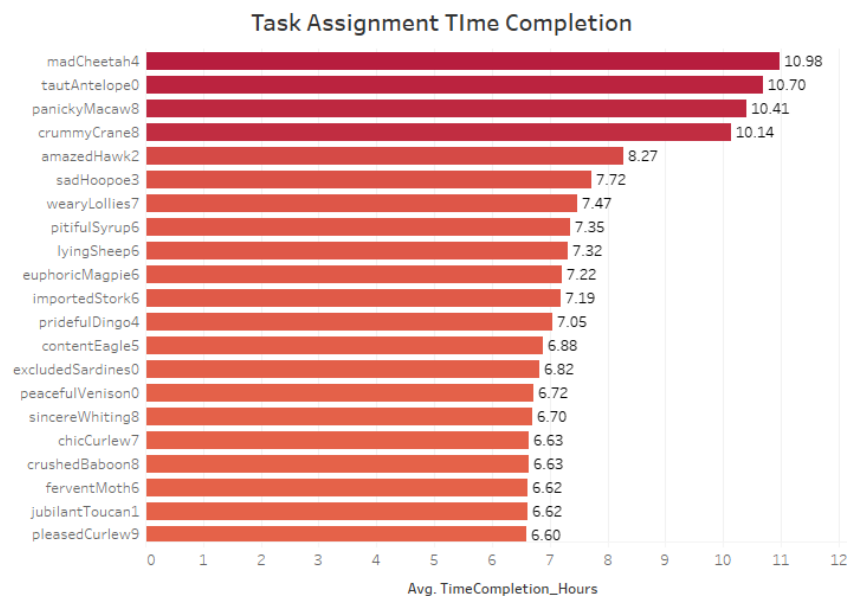| | 26.9% | | 33.5% | | 40.7% | | 44.2% | | 43.8% | | |
| 73.1% | | 66.5% | | 59.3% | | 55.8% | | 52.7% | | 56.2% | |

| PNK | PLM | TGL | GTO | PSR | PLW |

- Based on data we have many branches that has low completion rate, by these branches code provided we should have evaluation and focus on how we solve the issues happen, this include factors such as poor management, inedaquate staffing levels, low-quality equipment or other operational issues.

Branch Tasks Completion Time

BKS	4.7H
PWT	3.5H
DJJ	2.7H
SOQ	2.7H
AMQ	2.3H
MES	2.0H
JBR	1.9H
BPN	1.8H
KOE	1.7H
DPS	1.7H
UPG	1.7H
KDI	1.6H
CGK	1.6H
BDJ	1.6H
CBN	1.5H
SOC	1.5H
AMI	1.5H
SUB	1.5H
TGR	1.5H
MJK	1.5H
JOG	1.5H

Time Completion

On average time completion we received **1.5 Hour** for all branches, Time completion can have a significant impact on the overall performance of a delivery service. If packages are consistently delivered late, it can lead to customer dissatisfaction and a decrease in customer loyalty. On the other hand, if packages are consistently delivered on time or ahead of schedule, it can lead to increased customer satisfaction and loyalty. by these data we could see the performances of each branches time completion to deliver packages. **Branches with code BKS, PWT and DJJ** has poor time completion with more than 2 times than average, we could also held an evaluation and which assigned person may need additional support or resources.

D. Task Assignment Analysis

Task Assignment TIme Completion

| Assigned Person	Avg. TimeCompletion_Hours
madCheetah4	10.98
tautAntelope0	10.70
panickyMacaw8	10.41
crummyCrane8	10.14
amazedHawk2	8.27
sadHoopoe3	7.72
wearyLollies7	7.47
pitifulSyrup6	7.35
lyingSheep6	7.32
euphoricMagpie6	7.22
importedStork6	7.19
pridefulDingo4	7.05
contentEagle5	6.88
excludedSardines0	6.82
peacefulVenison0	6.72
sincereWhiting8	6.70
chicCurlew7	6.63
crushedBaboon8	6.63
ferventMoth6	6.62
jubilantToucan1	6.62
pleasedCurlew9	6.60

By the data, these are assigned person that have **poor performances**, it is found out that we have several person that has time completion **more than 5 hours** considering average completion time is 1.5 hours, we could these steps to overcome the issues by:

- Analyze the issues: we should analyze the issues to understand why the assigned person has a high average time completion. This could include factors such as **poor time management, inadequate training, or a lack of motivation.**
- **Provide additional training**: Based on your analysis, we should provide additional training to the assigned person to **improve their skills and knowledge**. This could include training on **time management techniques, communication skills, or specific job tasks**.
- **Set clear expectations**: It is important to set clear expectations for the assigned person, including deadlines and performance goals. This will help them to understand what is expected of them and work towards achieving these goals.
- **Provide feedback and support**: Regular feedback and support can help the assigned person to improve their performance. You should provide feedback on their progress and provide support as needed, such as coaching or mentoring.
- **Evaluate and adjust**: As the assigned person works to improve their performance, it is important to regularly evaluate their progress and make adjustments to your approach as needed. This will help to ensure that they continue to improve over time.

By taking these steps, you can help assigned persons who have a high average time completion to improve their performance and become more efficient and effective in their job. This can lead to improved overall performance of the delivery service and increased customer satisfaction.

E. Location Analysis

Task Volume by Kabupaten
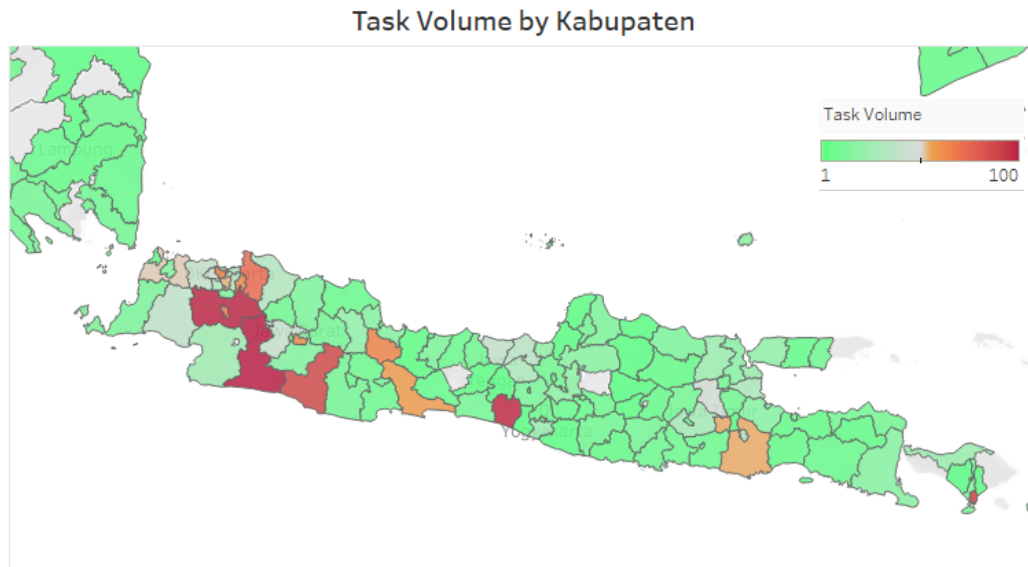
We could identify that Kab Bogor, Kab Cianjur, Kab Garut and Kab Purworejo having high volume task. By this data we can help to identify which areas have the highest volume of deliveries and in case which areas may need additional resources or support.

Failed Task by Kabupaten
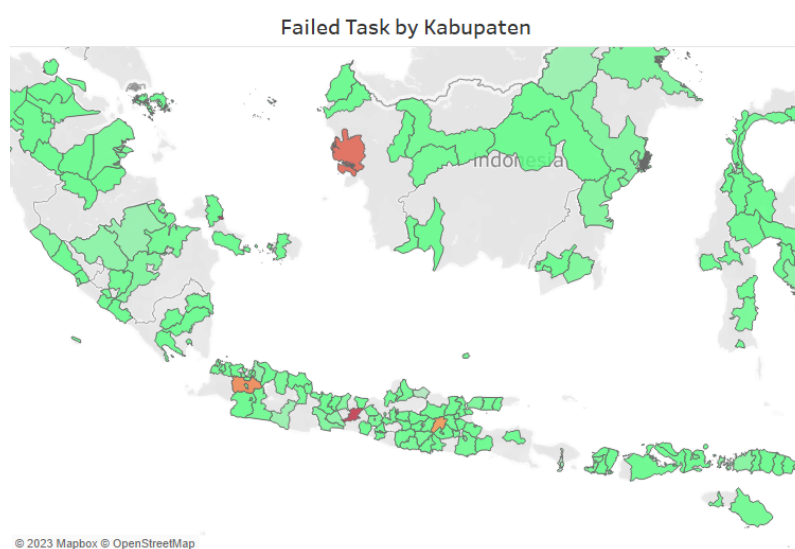
- Also we could identifiy that most of failed task are come from Kab Banjarnegara, Kab Buku Raya, Kab Bogor and Kab Nganjuk. **The failed rate of these kabupaten is relatively high** and suggests that there are significant challenges or issues in the delivery process. Most of issues are contributed from **misroute, incomplete address, customer not home and new address**. these are important to identify the causes of these failures and take steps to address them, such as improving package handling procedures or enhancing security measures.

F. Recommendation
- **Focus on improving the COD payment success rate**: If the data shows a low COD payment success rate, we should focus on improving the payment process for COD transactions. This

could include providing more payment options, simplifying the payment process, or providing additional training to personnel responsible for handling COD transactions.

- **Address low completion rates in specific branches**: If the data shows low completion rates in specific branches, we should focus on identifying the root causes of the problem and taking appropriate actions. This could include providing additional training or support to branch personnel, adjusting delivery routes, or reassigning personnel to improve branch performance.
- **Improve time completion performance** focus on improving time management and efficiency in the delivery process. This could include optimizing delivery routes, providing delivery personnel with better tools and resources, or implementing performance tracking and evaluation systems.
- **Address the area with the highest failed deliveries task**: should focus on area with high failed deliveries task and improving the delivery process in that area. This could include improving communication channels with customers, implementing stricter address verification protocols, providing additional training to delivery personnel, or working with local authorities to address unique challenges in the area.

Overall, it is important to use data to identify areas of improvement and take targeted actions to address these areas. By continuously monitoring and evaluating delivery performance, and taking appropriate actions to address issues, you can improve the overall performance of the delivery service and increase customer satisfaction.