**Research Question 3:**  
How has air travel behaviour among passengers changed on a monthly basis before and after COVID-19 for both short-haul and long-haul destinations?

To address this sub-question, we analysed a dataset containing flight and passenger numbers. This analysis focused on the three major airports in the Netherlands: Schiphol Airport, Eindhoven Airport, and Rotterdam The Hague Airport. The goal was to compare passenger travel behaviour before and after COVID-19 across short- and long-haul destinations.

**3.1 Approach**  
To examine travel behaviour for short- and long-haul destinations, we differentiated between these two categories. For the purpose of this analysis, all destinations within Europe were classified as short-haul, while all destinations outside Europe were designated as long-haul.

Another essential aspect of the analysis involved comparing travel behaviour before and after COVID-19. The dataset included all relevant years for this analysis, with the pre-COVID period defined as 2016 to 2019 and the post-COVID period from 2021 to August 2024.

The results have been plotted on a monthly basis for the periods before and after COVID-19.

**3.2 Results**

Based on the visual data of monthly flight totals from Dutch airports before (2016–2019) and after (2021–2024) COVID-19, the following insights can be drawn:

1. **Short-Haul Flights (2016–2019 vs. 2021–2024):**
   * **2016–2019:** Amsterdam Schiphol consistently accounted for the highest number of short-haul flights throughout the year, with a noticeable peak during the summer months (June to August). Eindhoven and Rotterdam had significantly lower totals, showing relatively stable monthly patterns.
   * **2021–2024:** While Amsterdam Schiphol remains the dominant airport for short-haul flights, the overall flight numbers appear lower compared to the pre-COVID period. A peak in the summer months is still present but less pronounced. Eindhoven and Rotterdam airports continue to show limited fluctuations, with minor increases during summer.
2. **Long-Haul Flights (2016–2019 vs. 2021–2024):**
   * **2016–2019:** Amsterdam Schiphol was again the leading airport for long-haul flights, with a consistent increase in flight numbers from early spring to a peak in July and August, followed by a gradual decrease towards December.
   * **2021–2024:** The post-COVID pattern shows a similar seasonal trend, though the peak in summer months is slightly less pronounced than before COVID-19. Total monthly flights for long-haul destinations appear lower compared to the 2016–2019 period, indicating a slower recovery in long-haul travel demand.

**Overall Observations:**

* **Pre- vs. Post-COVID Differences:** Both short- and long-haul flights have experienced a decrease in total numbers in the post-COVID period (2021–2024) compared to 2016–2019, particularly for Amsterdam Schiphol. This trend suggests an ongoing recovery phase, with pre-pandemic levels not yet fully reached.
* **Seasonal Trends:** Despite the impact of COVID-19, seasonal variations—peaking during summer—remain evident in both short- and long-haul travel patterns, though these peaks appear less sharp in the post-COVID period, reflecting potentially cautious or reduced travel behaviour among passengers.

These findings highlight the significant impact of COVID-19 on Dutch air travel, with long-haul flights showing a slightly slower return to pre-pandemic levels compared to short-haul travel.

Afbeelding met tekst, schermopname, lijn, diagram

Automatisch gegenereerde beschrijving

**3.3 Conclusion**

In conclusion, the analysis of monthly flight totals from Dutch airports reveals that COVID-19 has had a lasting impact on air travel patterns, with both short- and long-haul flights showing a notable reduction in volume during the post-pandemic period compared to 2016–2019 levels.

While Amsterdam Schiphol remains the predominant airport for both types of flights, the total number of flights has decreased, particularly for long-haul destinations, which are recovering more slowly than short-haul routes. Seasonal trends, such as increased travel during the summer months, continue to shape air travel behaviour; however, these peaks are less pronounced in the post-COVID period, suggesting an ongoing adjustment in passenger demand.

Overall, the data reflect a cautious rebound in air travel, with Dutch airports yet to reach pre-pandemic levels, highlighting the pandemic's enduring influence on travel behaviour and demand.