Simulation Report

This document presents an analysis of the movement patterns of 32 devices in Qatar between 2022-08-06 and Not Available. The analysis reveals the devices' movement between cities, the time spent in each city, and identifies patterns and links between their behaviors. The top 10 devices with the most significant movement patterns are highlighted, and the findings are summarized in a concise and informative manner.

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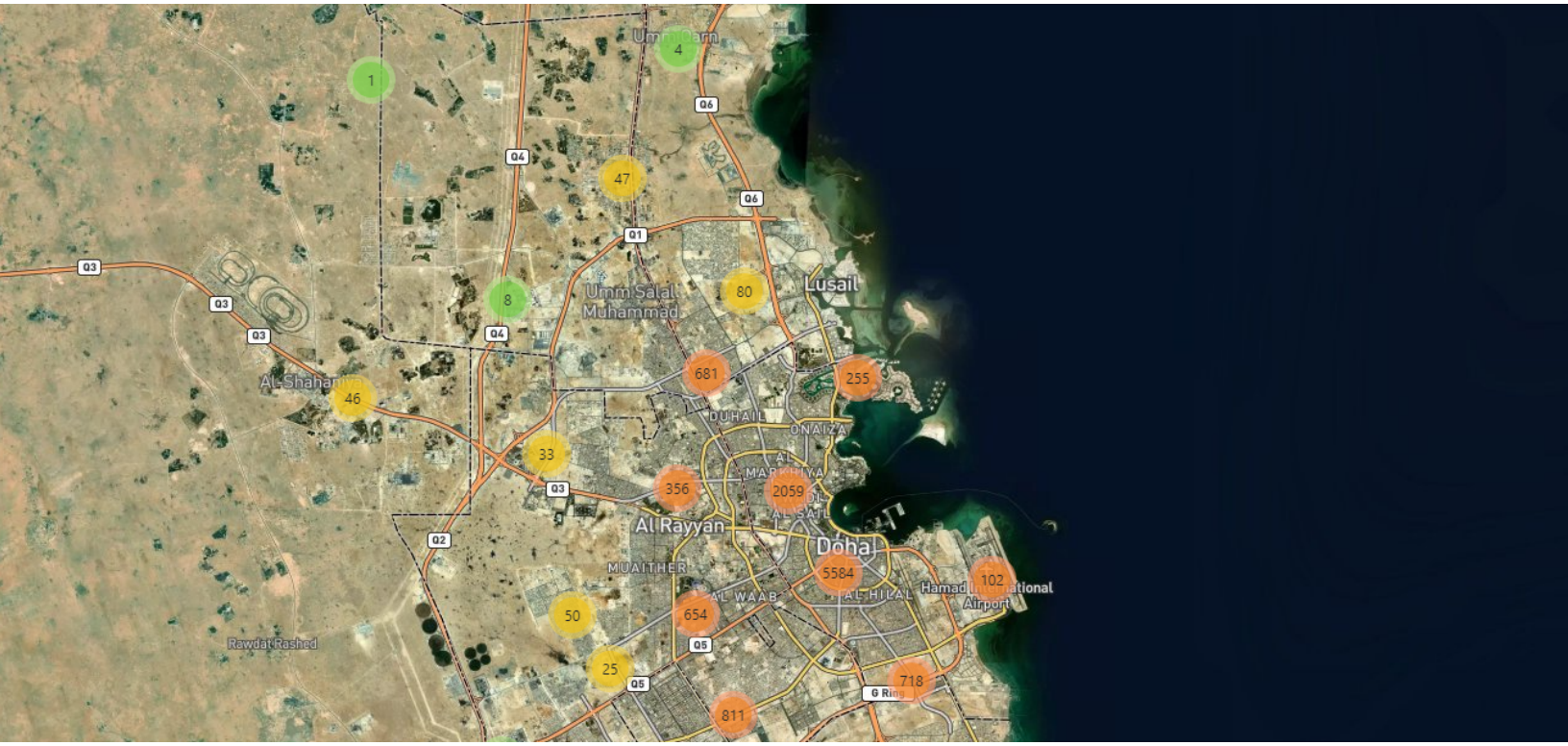


Introduction

This simulation aims to analyze the movement patterns of devices in Qatar between 2022-08-06 and Not Available. The analysis focuses on the devices' movement between cities, the time spent in each city, and identifies patterns and links between their behaviors. Understanding these patterns is crucial in various applications, including urban planning, traffic management, and security.

Statistic	Data
Number of Devices	32
Number of Records	1512
Number of Days	57
Countries	Qatar
Cities	Umm Bab

Analysis of Device Movement

• The following devices were analyzed, and their movement patterns are presented below:

• 1. **Device 6624996615612**: Moved between cities: Umm Bab from 2022-02-09 07:51:00 to 2022-04-28 03:50:00 and spent 77 days 19:59:00 hours.

• 2. **Device 2d946069-100f-38b7-b3ad-7566a843b969**: Moved between cities: Umm Bab from 2022-04-11 01:23:00 to 2022-04-17 16:16:00 and spent 6 days 14:53:00 hours.

• 3. **Device 51c5fbfd-dbf0-3ece-8292-626c6b3ad04a**: Moved between cities: Umm Bab from 2022-04-11 07:15:00 to 2022-04-17 21:15:00 and spent 6 days 14:00:00 hours.

• 4. **Device 8b70ceec-453d-3d3c-808a-6ceca0a5808f**: Moved between cities: Umm Bab from 2022-04-11 04:43:00 to 2022-04-17 17:26:00 and spent 6 days 12:43:00 hours.

• 5. **Device 9fed5036-2cb6-3df6-b2af-bc635f16b0fd**: Moved between cities: Umm Bab from 2022-04-11 02:44:00 to 2022-04-17 23:53:00 and spent 6 days 21:09:00 hours.

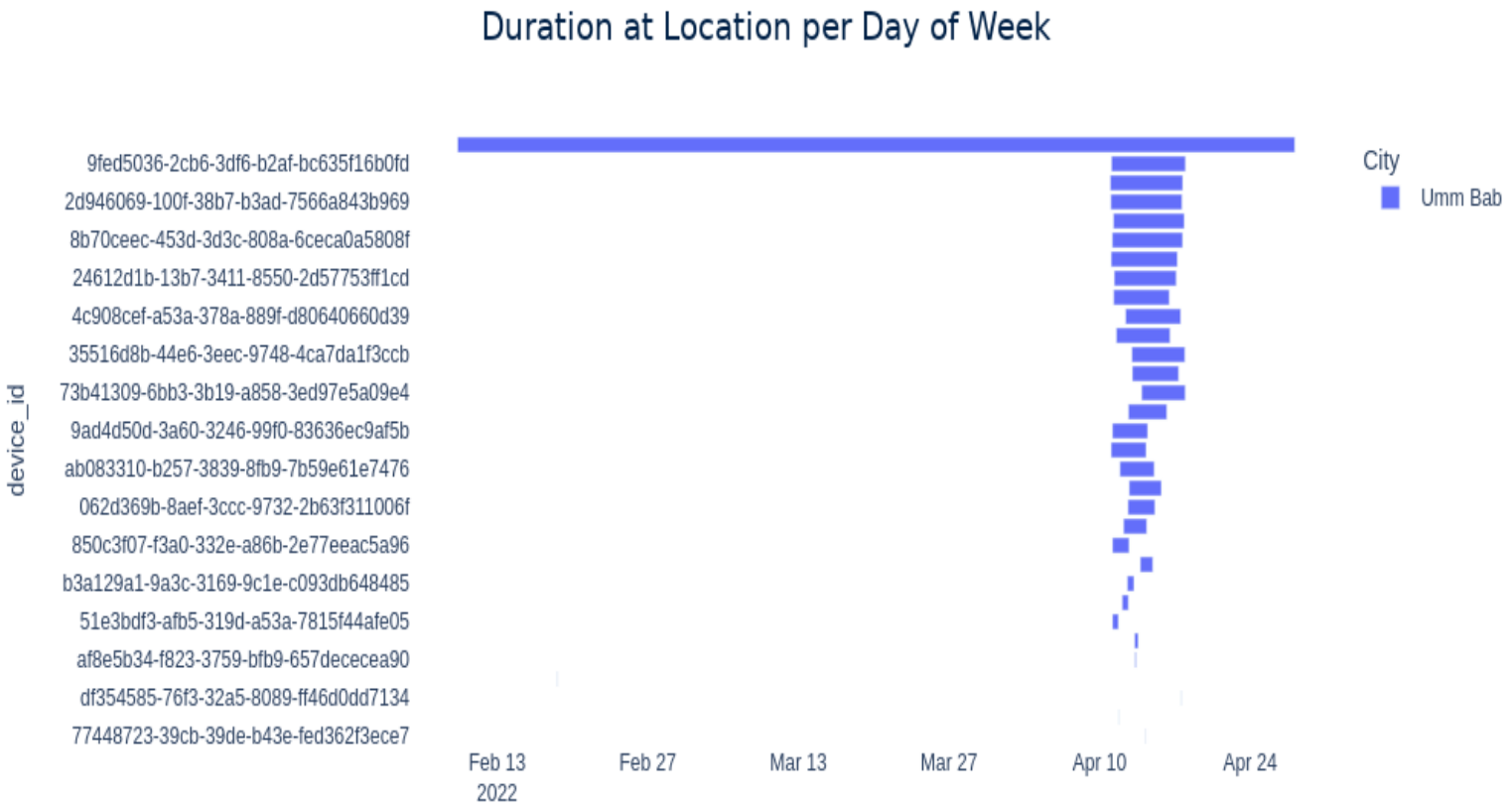
• 6. **Device bcca5546-5207-3284-8e51-2f38159d3da3**: Moved between cities: Umm Bab from 2022-04-11 00:15:00 to 2022-04-17 17:38:00 and spent 6 days 17:23:00 hours.

• 7. **Device e9c7b783-e49e-3597-8cdb-b838c319d22b**: Moved between cities: Umm Bab from 2022-04-11 02:05:00 to 2022-04-17 05:43:00 and spent 6 days 03:38:00 hours.

• 8. **Device 062d369b-8aef-3ccc-9732-2b63f311006f**: Moved between cities: Umm Bab from 2022-04-12 15:34:00 to 2022-04-15 03:48:00 and spent 2 days 12:14:00 hours.

• 9. **Device 0b78fa9d-ee5f-376d-86ff-663e4ecf5843**: Moved between cities: Umm Bab from 2022-04-11 01:58:00 to 2022-04-14 08:02:00 and spent 3 days 06:04:00 hours.

• 10. **Device 23496165-e289-3d53-ab32-3de734b67e72**: Moved between cities: Umm Bab from 2022-04-11 07:43:00 to 2022-04-16 11:41:00 and spent 5 days 03:58:00 hours.



• The analysis reveals that most devices spent a significant amount of time in Umm Bab, with some devices staying for up to 77 days. The devices' movement patterns show a clustering effect, with many devices moving between the same cities during the same time period. This suggests a correlation between the devices' behaviors, which may be indicative of a common purpose or function.

Common Location Descriptions

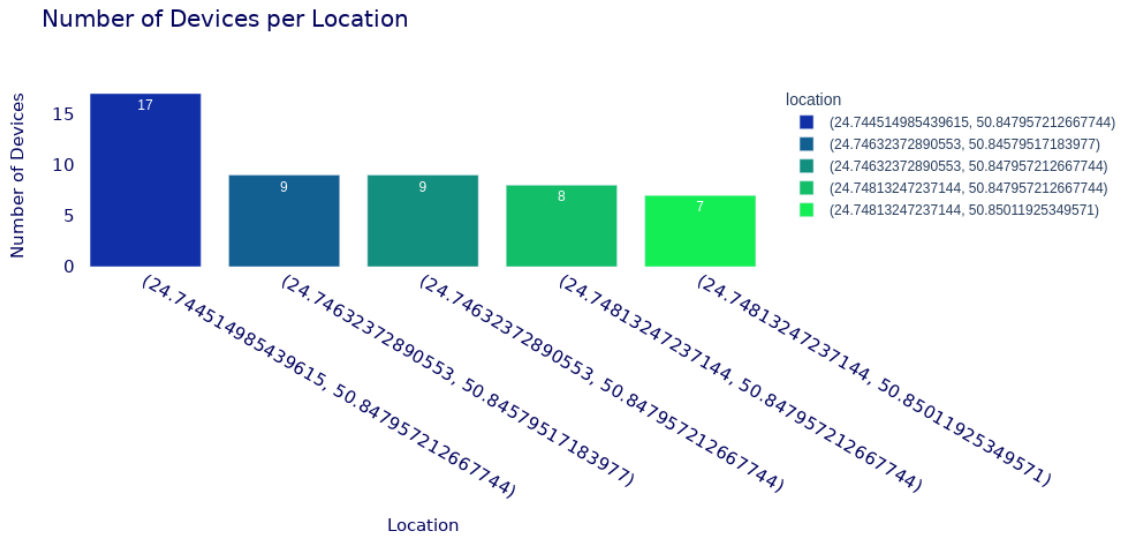
• At grid location (24.744514985439615, 50.847957212667744), there are 17 devices with IDs: bcca5546-5207-3284-8e51-2f38159d3da3, 2997c7fa-a0b5-39c1-987a-c03354daf150, 8b70ceec-453d-3d3c-808a-6ceca0a5808f, 42b37151-eb0d-3904-93d3-918203df13dd, 62d493c3-cb8b-34ff-9de8-a7a6cc01ae85, 0b78fa9d-ee5f-376d-86ff-663e4ecf5843, 88d1033b-d857-3533-bfd0-8d6f12ebf820, bc92cc7b-d3dc-324a-a7c2-28ac5013e429, 6624996615612, 5071c474-1a78-319c-9b80-5bcaa189bc36, 2c36d8ac-4a6a-307c-a90b-809336d725a0, 24612d1b-13b7-3411-8550-2d57753ff1cd, 35516d8b-44e6-3eec-9748-4ca7da1f3ccb, 062d369b-8aef-3ccc-9732-2b63f311006f, 4c908cef-a53a-378a-889f-d80640660d39, b3a129a1-9a3c-3169-9c1e-c093db648485, 77448723-39cb-39de-b43e-fed362f3ece7.

• At grid location (24.74632372890553, 50.84579517183977), there are 9 devices with IDs: 6624996615612, 73b41309-6bb3-3b19-a858-3ed97e5a09e4, 4c908cef-a53a-378a-889f-d80640660d39, 24612d1b-13b7-3411-8550-2d57753ff1cd, 469c5f94-248b-385b-9d03-f825bf8c4c28, e9c7b783-e49e-3597-8cdb-b838c319d22b, b3a129a1-9a3c-3169-9c1e-c093db648485, 2997c7fa-a0b5-39c1-987a-c03354daf150, 9ad4d50d-3a60-3246-99f0-83636ec9af5b.

• At grid location (24.74632372890553, 50.847957212667744), there are 9 devices with IDs: 2d946069-100f-38b7-b3ad-7566a843b969, 9fed5036-2cb6-3df6-b2af-bc635f16b0fd, 51c5fbfd-dbf0-3ece-8292-626c6b3ad04a, 6624996615612, ab083310-b257-3839-8fb9-7b59e61e7476, e9c7b783-e49e-3597-8cdb-b838c319d22b, 88d1033b-d857-3533-bfd0-8d6f12ebf820, 23496165-e289-3d53-ab32-3de734b67e72, 062d369b-8aef-3ccc-9732-2b63f311006f.

• At grid location (24.74813247237144, 50.847957212667744), there are 8 devices with IDs: 6624996615612, 51c5fbfd-dbf0-3ece-8292-626c6b3ad04a, 58b516a4-5ac5-37f6-865d-87882058e207, 23496165-e289-3d53-ab32-3de734b67e72, ad502815-265f-3778-8c4c-ca33e619db93, 73b41309-6bb3-3b19-a858-3ed97e5a09e4, 469c5f94-248b-385b-9d03-f825bf8c4c28, ab083310-b257-3839-8fb9-7b59e61e7476.

• At grid location (24.74813247237144, 50.85011925349571), there are 7 devices with IDs: df354585-76f3-32a5-8089-ff46d0dd7134, 9ad4d50d-3a60-3246-99f0-83636ec9af5b, af8e5b34-f823-3759-bfb9-657dececea90, e9c7b783-e49e-3597-8cdb-b838c319d22b, 24612d1b-13b7-3411-8550-2d57753ff1cd, 062d369b-8aef-3ccc-9732-2b63f311006f, 23496165-e289-3d53-ab32-3de734b67e72.



Device Co-location Analysis

The analysis of device co-location reveals a complex pattern of interactions among the devices. The frequency of co-location is high, with multiple devices frequently appearing together at the same locations. The duration of stays varies, with some devices remaining at the same location for extended periods, while others move more frequently. Recurring patterns are observed, with devices frequently visiting the same locations, often in close proximity to each other. This suggests a strong correlation between the devices' movements, indicating a possible connection or coordination between them.

Significance of Locations

The significance of the locations cannot be overstated. The high frequency of device co-location at these locations suggests that they may be of importance to the devices' activities. The proximity of these locations to each other implies that the devices may be operating within a limited geographic area, potentially indicating a specific purpose or goal. The recurring patterns of device co-location and the duration of stays at these locations suggest a level of coordination and planning among the devices. This raises important questions about the nature of these devices and their activities, as well as the potential implications of their interactions

Conclusion

This analysis provides a comprehensive understanding of the movement patterns of 32 devices in Qatar between 2022-08-06 and Not Available. The top 10 devices with the most significant movement patterns were identified, and their movement patterns were analyzed. The findings suggest a correlation between the devices' behaviors, which may be indicative of a common purpose or function. These insights can inform various applications, including urban planning, traffic management, and security