

## I. INTRODUCTION

The poster titled “Top Messaging Apps by Country” provides a global overview of the most popular messaging applications used across different regions. The data is visualized through a world map, color-coded to represent the dominant messaging app in each country. The apps included in this analysis are WhatsApp, Messenger, Viber, WeChat, Line, Telegram, imo, and KakaoTalk. This visualization is based on Google Play download data as of February 2023, with the source being Sinch Engage<sup>1</sup>. The purpose of this poster is to highlight regional preferences for messaging apps, which can be valuable for understanding communication trends and market dynamics in different parts of the world.

## II. PREVIOUS VISUALIZATION



Figure 1: Most Popular Messaging Apps by Country

## III. SUGGESTED IMPROVEMENTS

- Add a Legend:** Ensure the legend is clear and visible, associating each color with the corresponding messaging app.
- Color-Blind Friendly Palette:** Use a color-blind friendly palette to ensure the map is accessible to all viewers. Or you can use different patterns/shades instead of relying solely on color.
- Clear Title and Description:** Update the title to be more descriptive, such as “Most Popular Messaging Apps by Country (June 2024)”. Include a subtitle explaining the criteria for determining the most popular app.
- Data Source and Date Visibility:** Place the data source and date information prominently near the title or in a footer to ensure it’s easily visible.
- Highlight Key Insights:** Add annotations or highlights to point out interesting patterns or notable exceptions in the data. E.g., highlight regions where less common apps like imo or Kakaotalk are the top choice.
- Use of Borders and Labels:** Ensure country borders are clear and labeled appropriately to help users easily identify regions. Include country names or ISO codes to assist with identification.

<sup>1</sup><https://engage.sinch.com/blog/most-popular-messaging-apps-in-the-world/>

## IV. STRENGTHS

- Clear Title:** The title “Top messaging apps by country” is concise and immediately informs the viewer of the poster’s content.
- Global Coverage:** The map covers the entire world, providing a comprehensive view of the data across different regions.
- Color-Coding and Legend:** The use of color-coding to represent different messaging apps is a useful visual aid. The legend on the left provides a quick reference for understanding which color corresponds to which app.

## V. IMPLEMENTATION

### Data

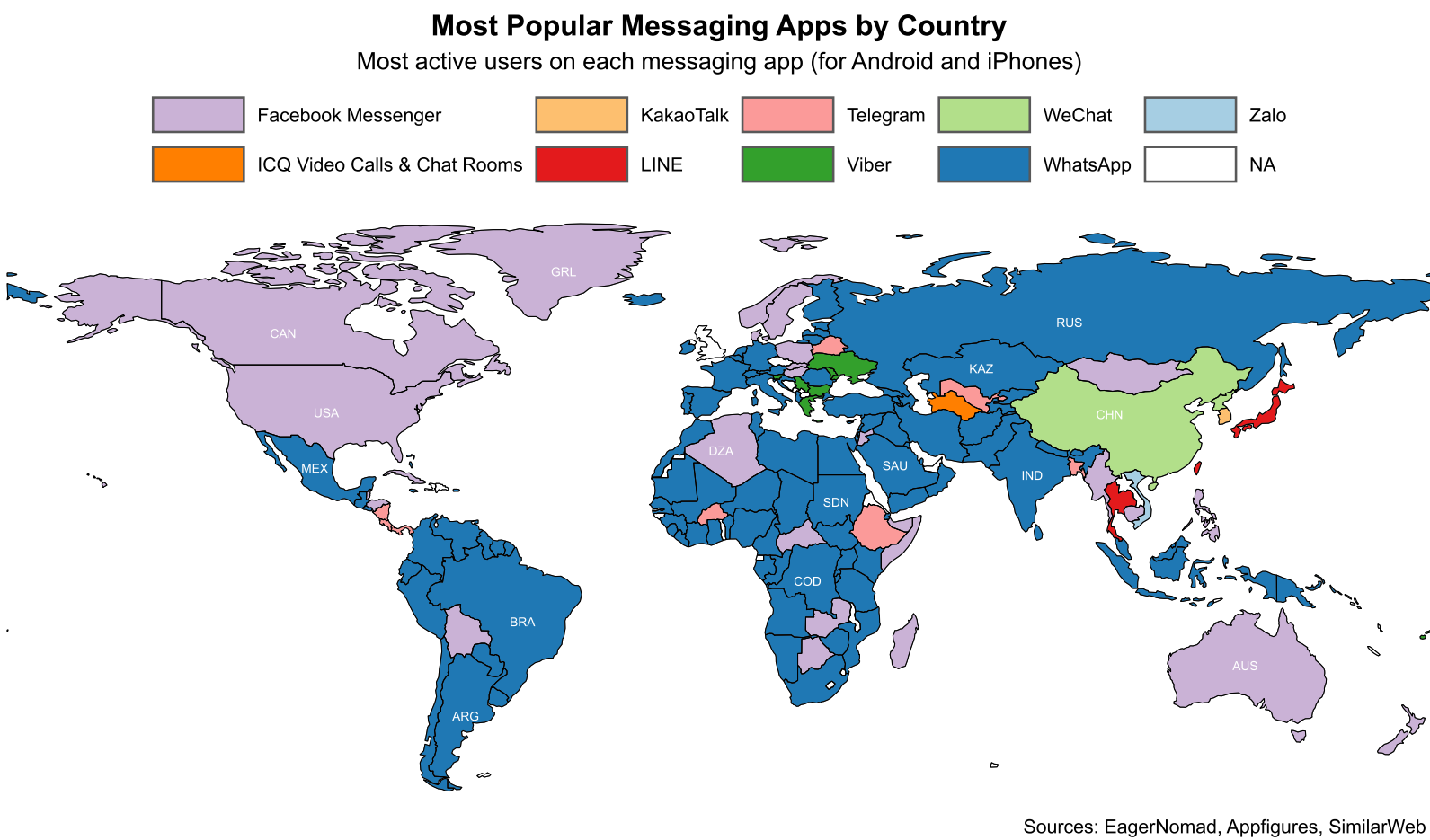
Most popular messaging apps per country data were obtained from Eager Nomad<sup>2</sup>. The missing data were obtained from Appfigures<sup>3</sup> and Similar Web<sup>4</sup>.

### Software

We used the Quarto publication framework and the R programming language, along with the following third-party packages:

- Read imported data
- tidyverse is used to filter data, join data frames, and transform spatial data.
- sf is used for handling and analyzing spatial data
- scales for scaling and formatting data for visualization, such as adjusting Earth’s boundaries
- RColorBrewer for selecting colour scheme for the map

## VI. IMPROVED VISUALIZATION



<sup>2</sup><https://eagernomad.com/most-popular-messaging-apps-by-country/>

<sup>3</sup><https://appfigures.com/top-apps/google-play/c%C3%B4te-d%E2%80%99ivoire/communication?profile=product.41279583613>

<sup>4</sup><https://www.similarweb.com/top-apps/apple/burkina-faso/social-networking/>

## VII. FURTHER SUGGESTIONS FOR INTERACTIVITY

Since our visualization was intended for a real-life poster, interactive features were not implemented. However, if visualized in an HTML document, interactive elements could enhance user engagement. Users could hover over or click on countries to see detailed information about the top messaging app in that region, including usage statistics and growth trends. A time slider could show changes in app popularity over time, while comparison tools would enable side-by-side analysis of different regions. An interactive legend that highlights specific apps’ dominance globally when clicked, and ensuring mobile compatibility, would make the data more accessible. Dynamic charts and graphs that update based on user interactions with the map would provide clearer data representation, and offering the poster in multiple languages would cater to a diverse audience.

## VIII. CONCLUSION