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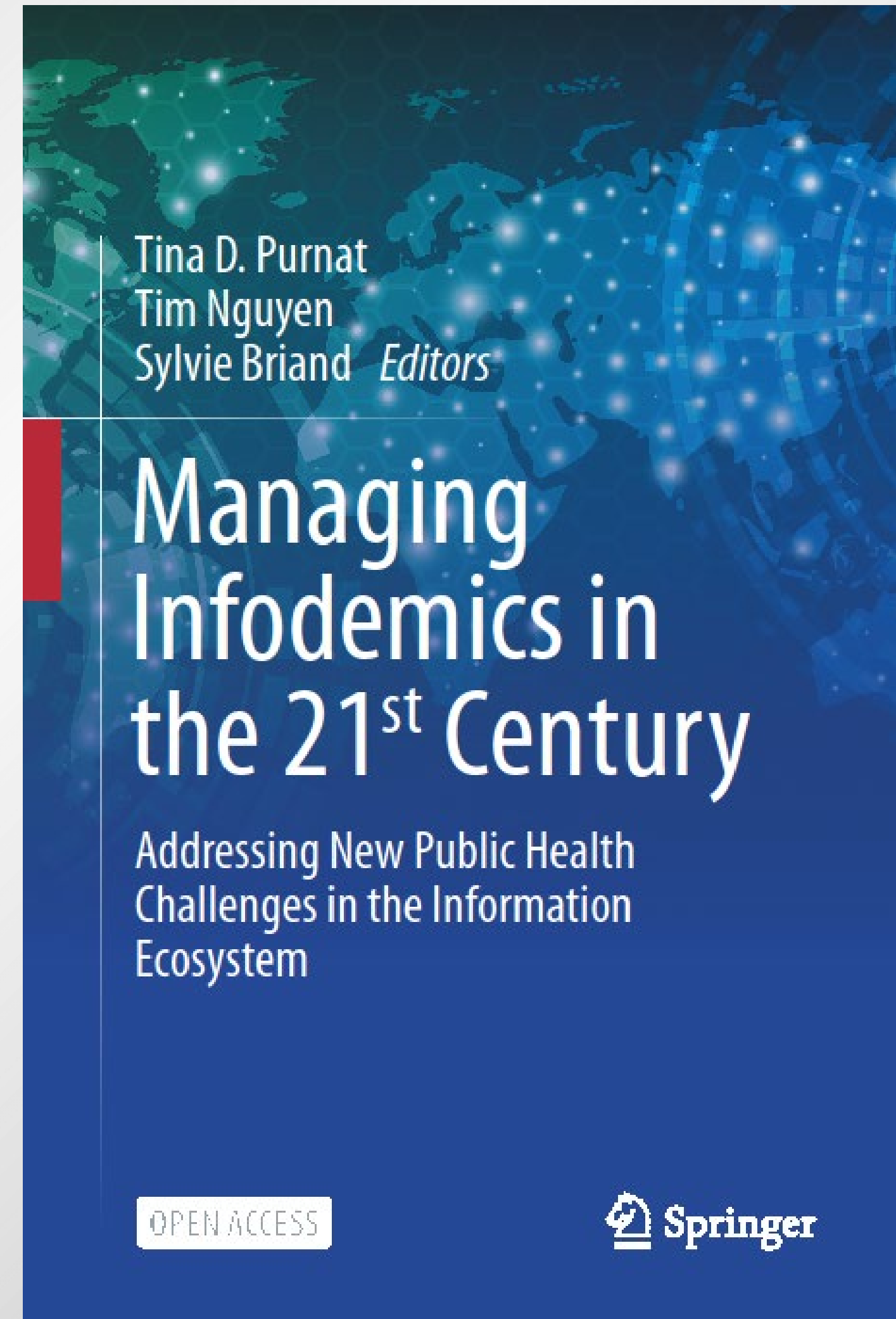
The use of digital conversational agents for alcohol education and brief interventions aimed at the general public

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International Consultant



COVID-19 contributed to an infodemic related to alcohol and health issues

An infodemic is an overabundance of information, accurate or not, in the digital and physical space, accompanying an acute health event such as an outbreak or epidemic. (World Health Organization [n.d.-b](#))



PAHO's first AI digital health worker

Pahola is an autonomously animated A.I. launched on PAHO's website on 19 November 2021

She was created in partnership with Soul Machines and Rooftop, using Google Dialogflow and AWS;

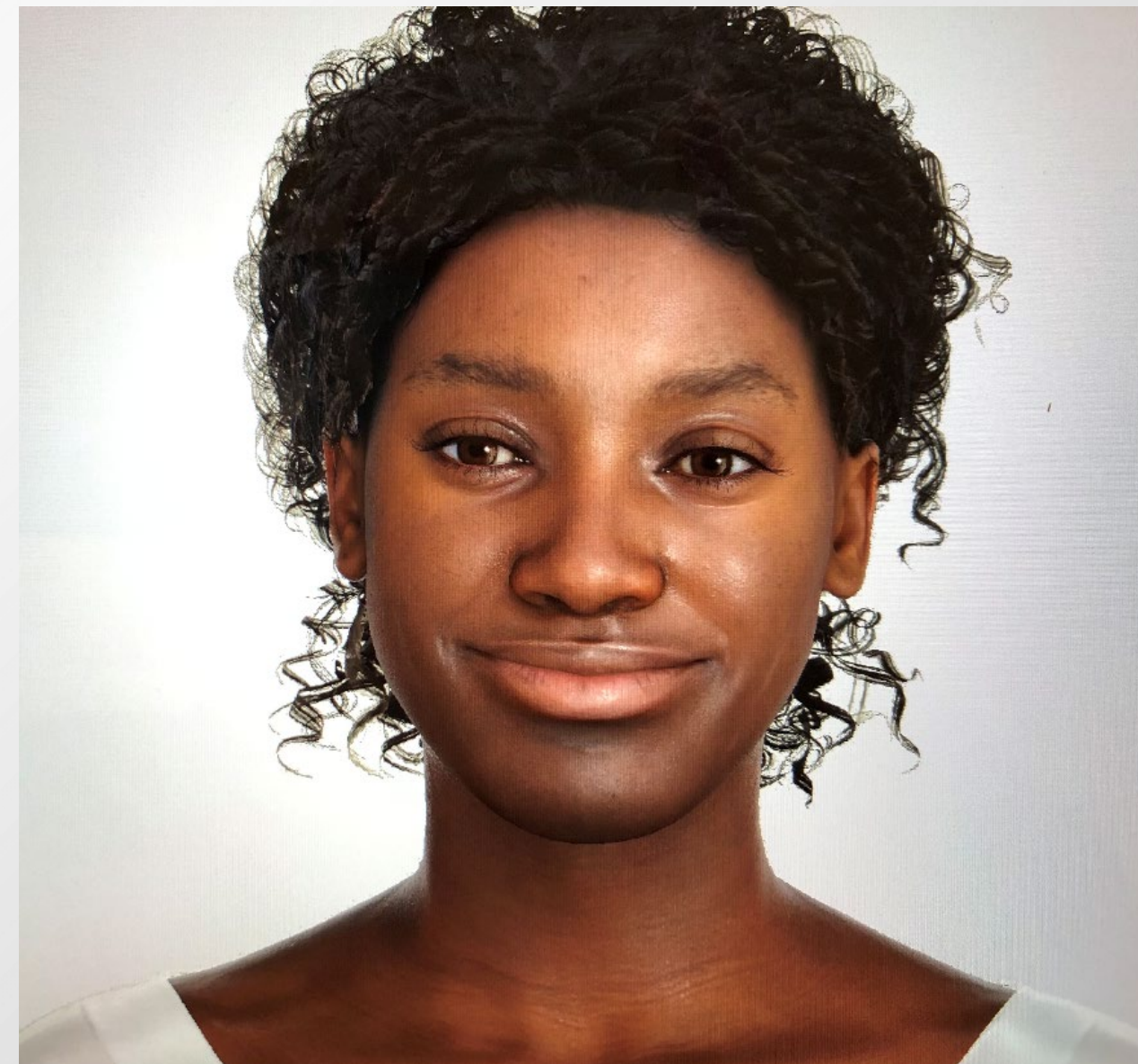
Accessible through any device through a link to PAHO's website

Meaningful connections with users: Pahola has a 'Digital Brain' and could engage with users in an empathetic, attentive, non-judgmental, human-like way

Anonymous interaction using video and microphone

Speaks 4 languages (English, Spanish, Portuguese, French)

All content was created by PAHO



What Pahola could do?

- **Talk about alcohol related topics (over 100): impact on health and other areas; general information on alcohol, on standard drink, abstinence, alcohol policy, etc;**
- **Screen for alcohol use disorders using AUDIT-C**
- **Provide a brief intervention for those at significant risk, following steps of MI**
- **Provide information on health services by country (including AA services)**
- **Provide information to those interested in helping others (a loved one)**
- **'Follow up' to returning users**

Pahola, the first digital specialist on health and alcohol use

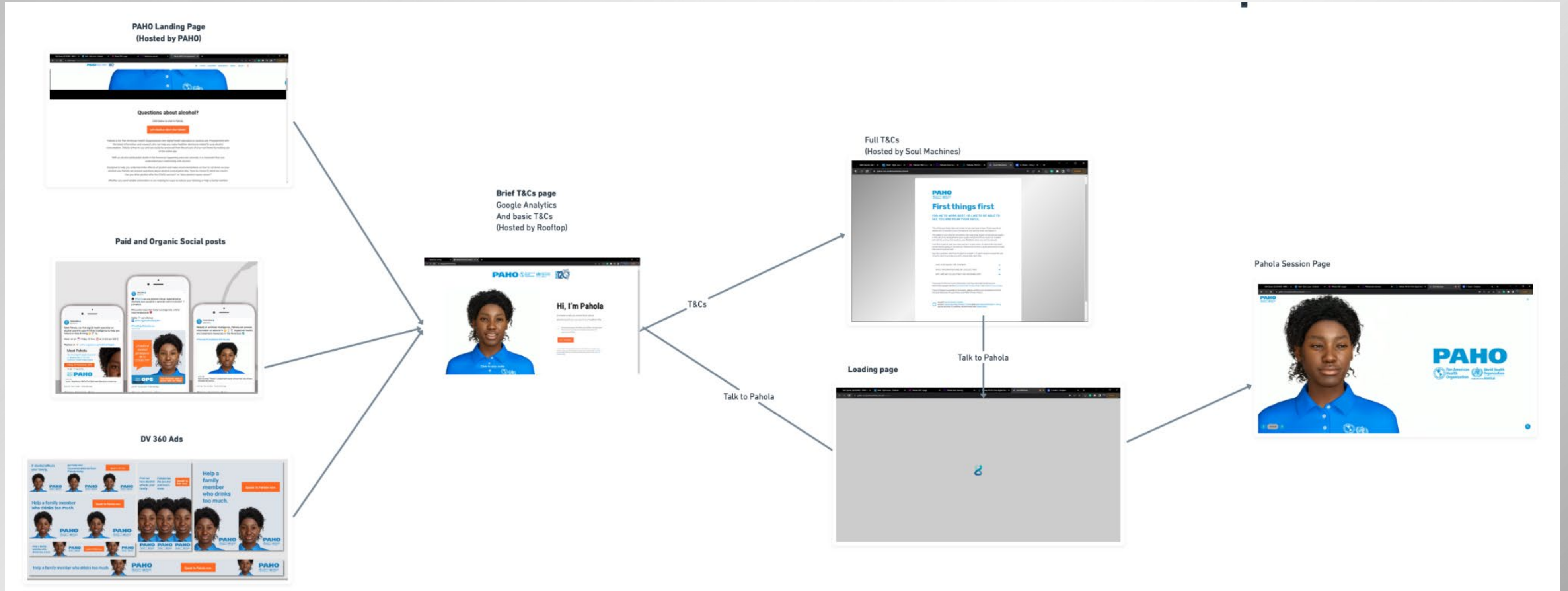


Top Performing Creative in March 23 (English Campaign)

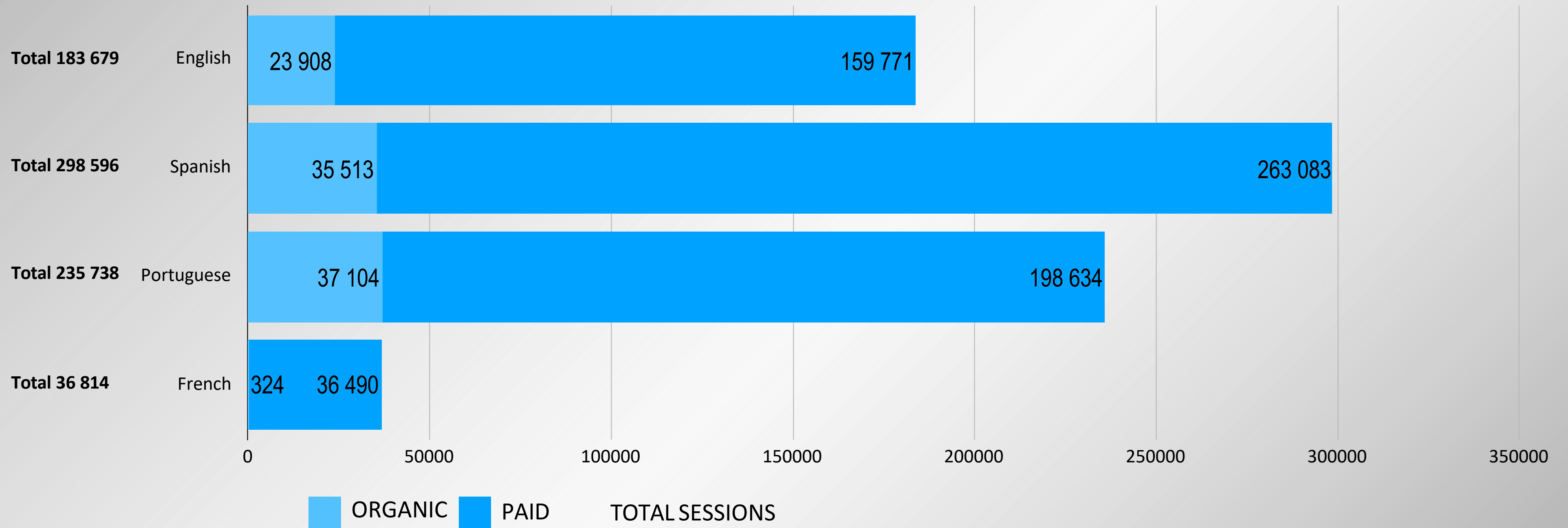
Impressions	1 128 082
Clicks	13 648
CPC	\$0,01
CTR	1.03%



Brief Overview of the User Journey

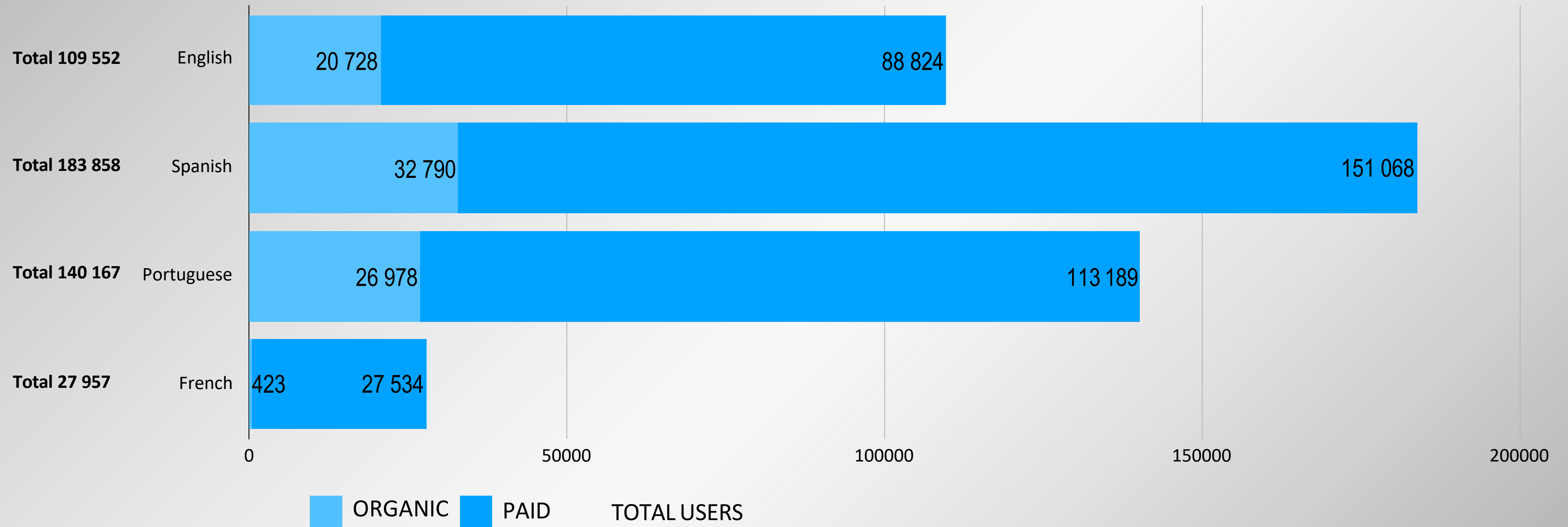


Sessions on PAHOLAs T&C page



752 827 Total Sessions - 657 978 are generated by paid ads (87.4%)

Users on PAHOLAs T&C page



461 534 Users - 380 615 are generated by paid ads (83%)

Let's chat with Pahola

- 8 766 clicks on the “Let's chat” button
 - Spanish: 3 690
 - Portuguese: 2 840
 - English: 2 169
 - French: 67



Pahola Conversation Analytics

The following statistics were sourced from multiple information sources, Soul Machines proprietary platforms include DDNA Insights and SoulMachines EQ Dashboard, which were used as “control” data sources, given their limited data tracking.

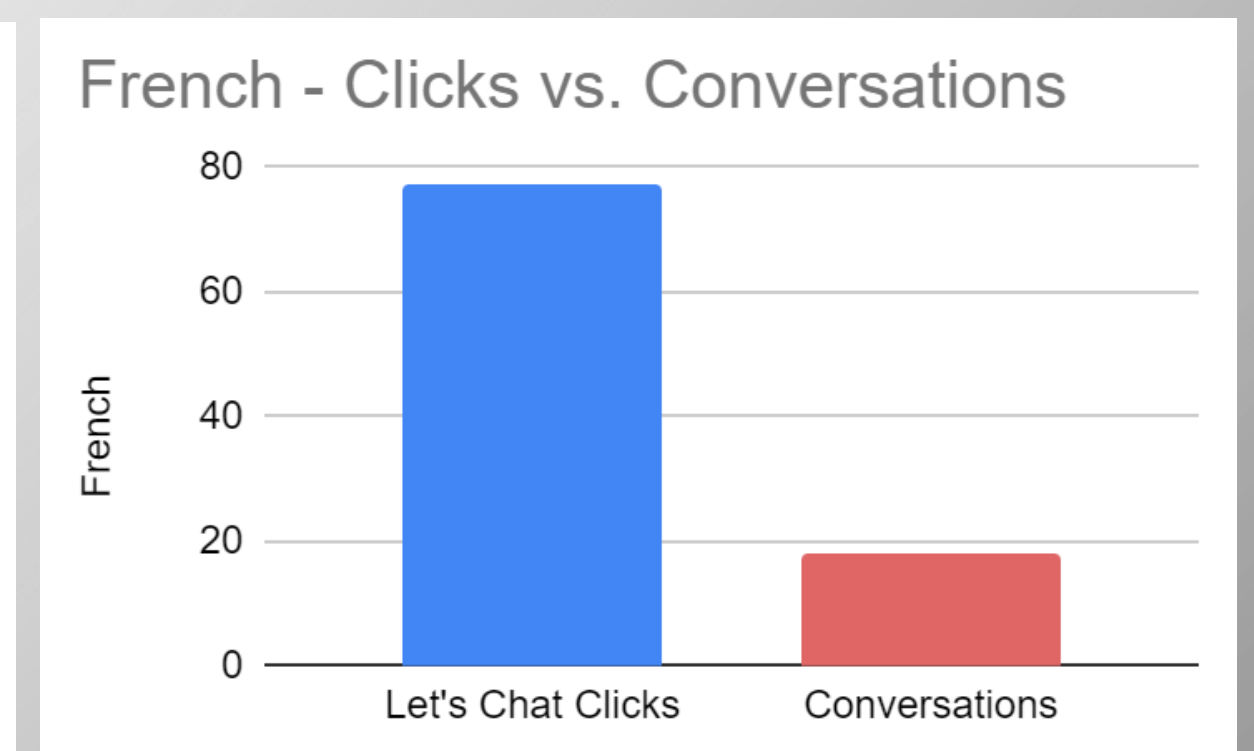
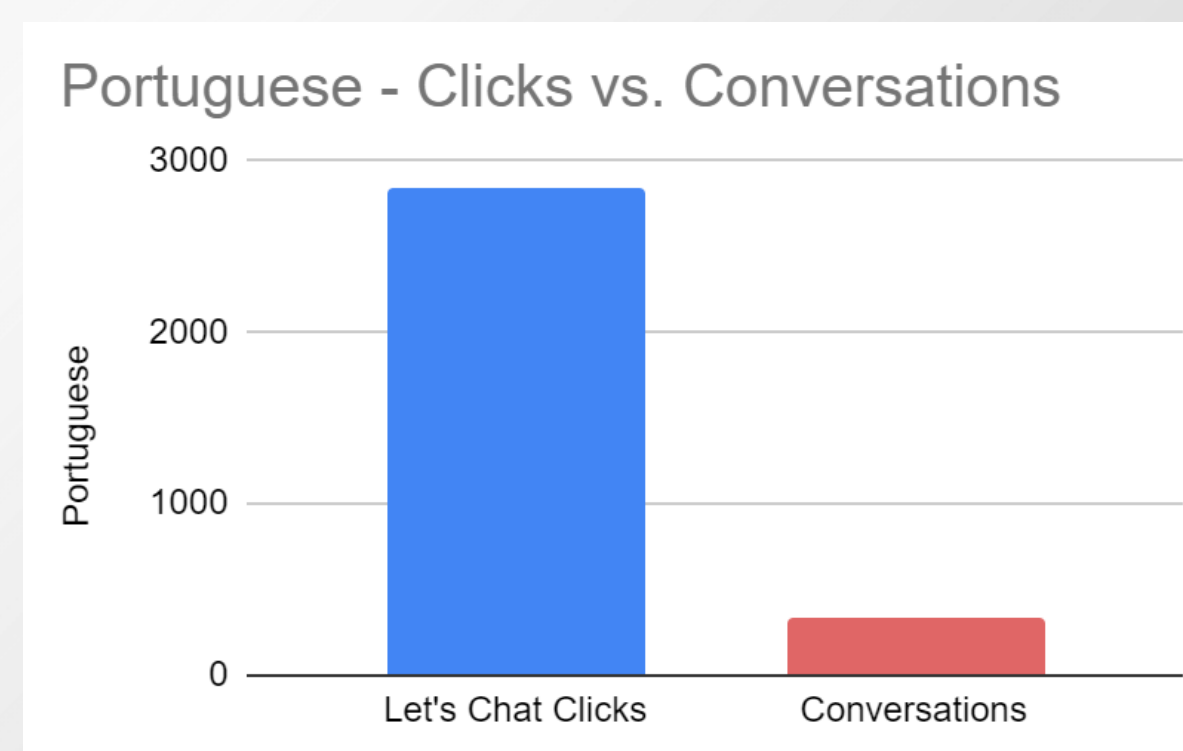
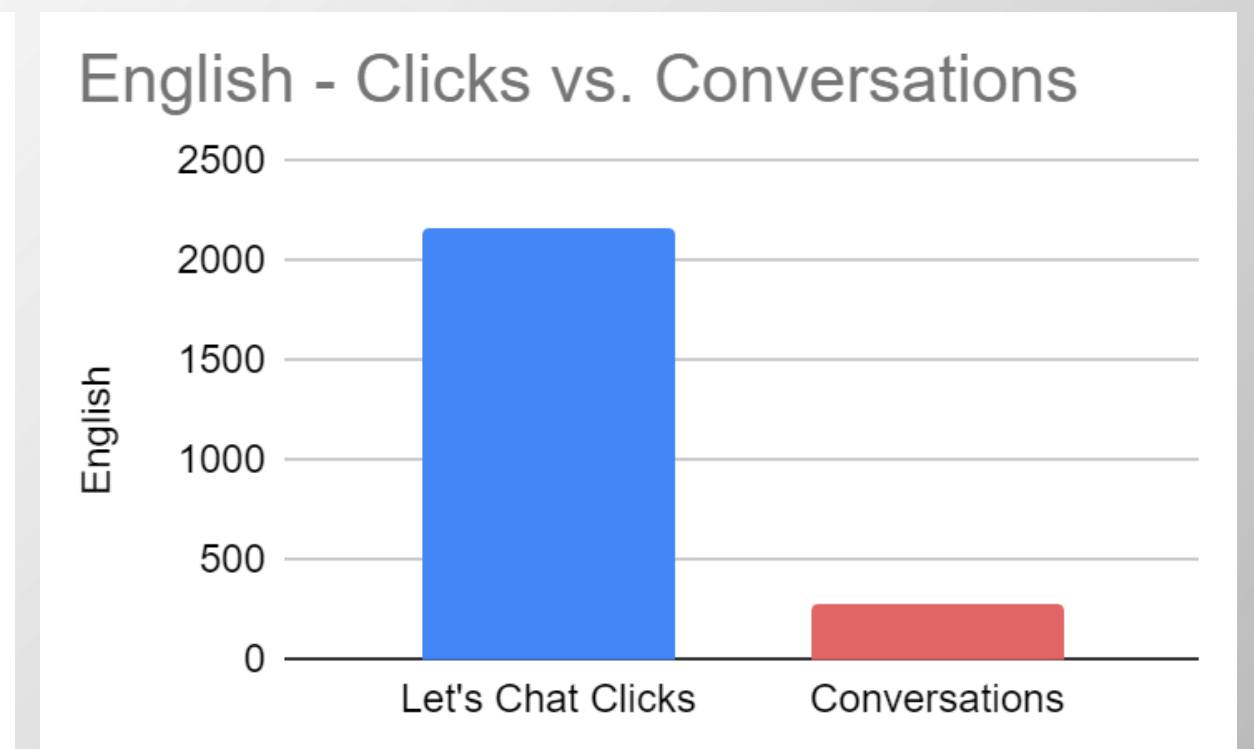
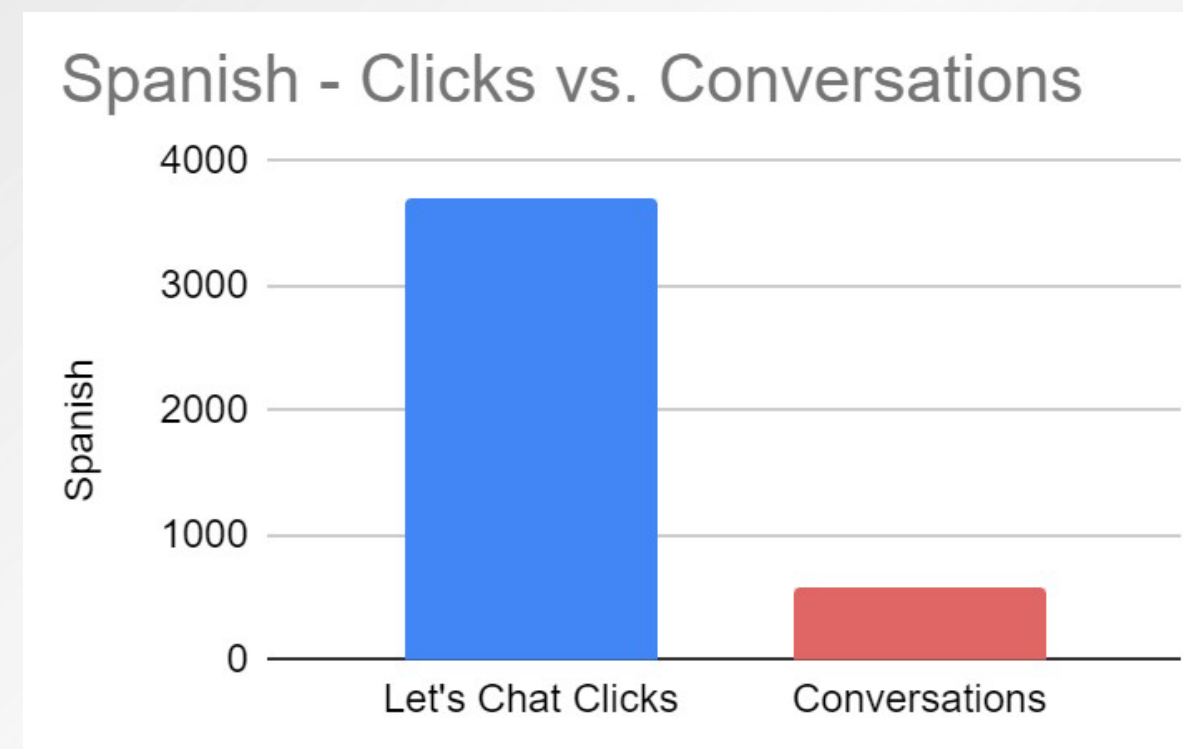
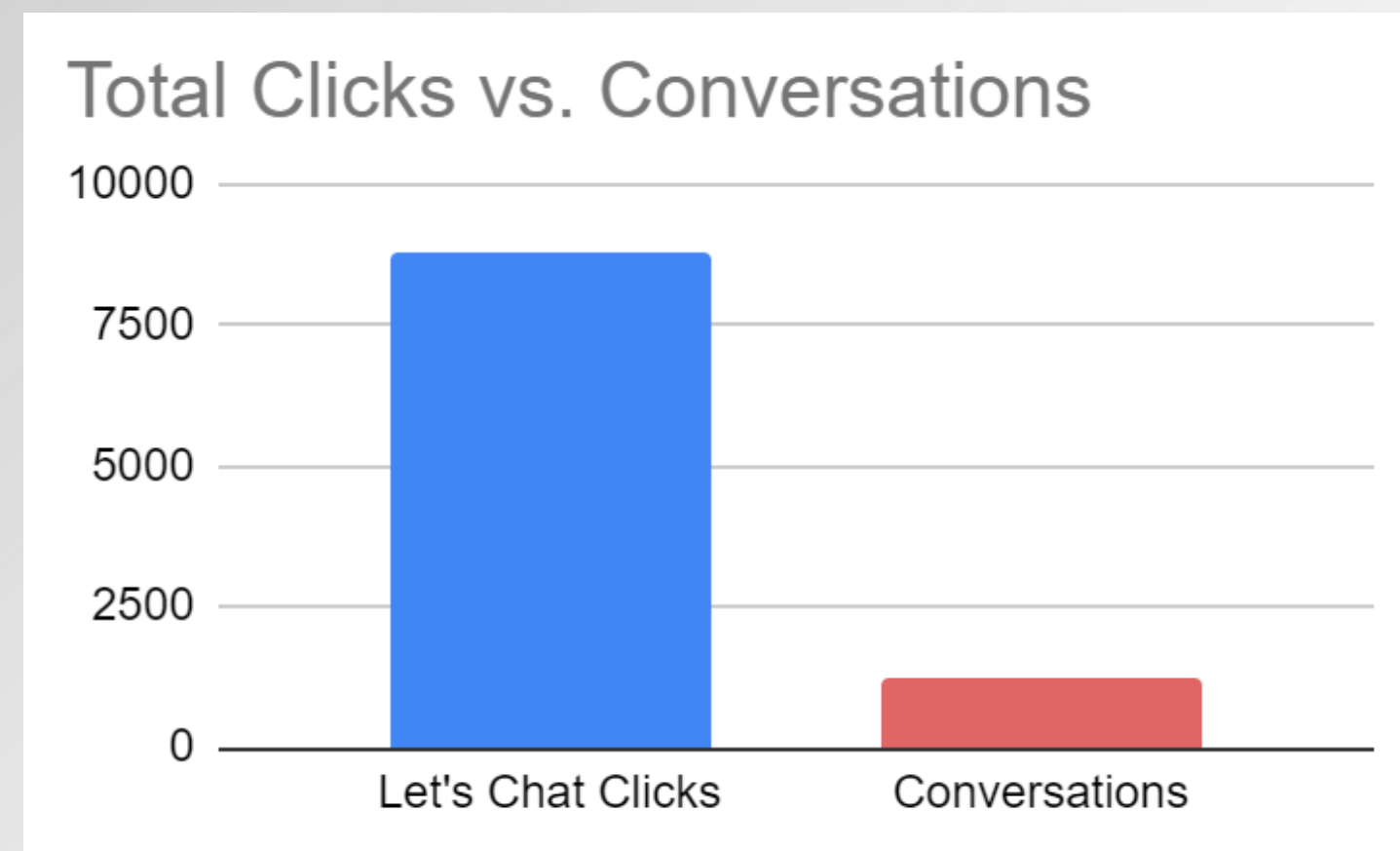
In order to supplement the data provided, Roof Top has implemented Google Analytics to track traffic to the conversation page. In addition to this, we have revised the Dialogflow Analytics to give broad insights into conversations.

Lastly, Roof Top has developed a custom conversation tracking solution, which has provided anonymised data on user behaviour when interacting with Pahola.

All metrics in this report were measured cumulatively to show results to date (at end January).

Brief T&Cs to Pahola Session - Retention stats

This shows the drop off of users who clicked “Talk to Pahola” on the Brief T&Cs page compared to how many users spoke to Pahola for over 15 seconds.



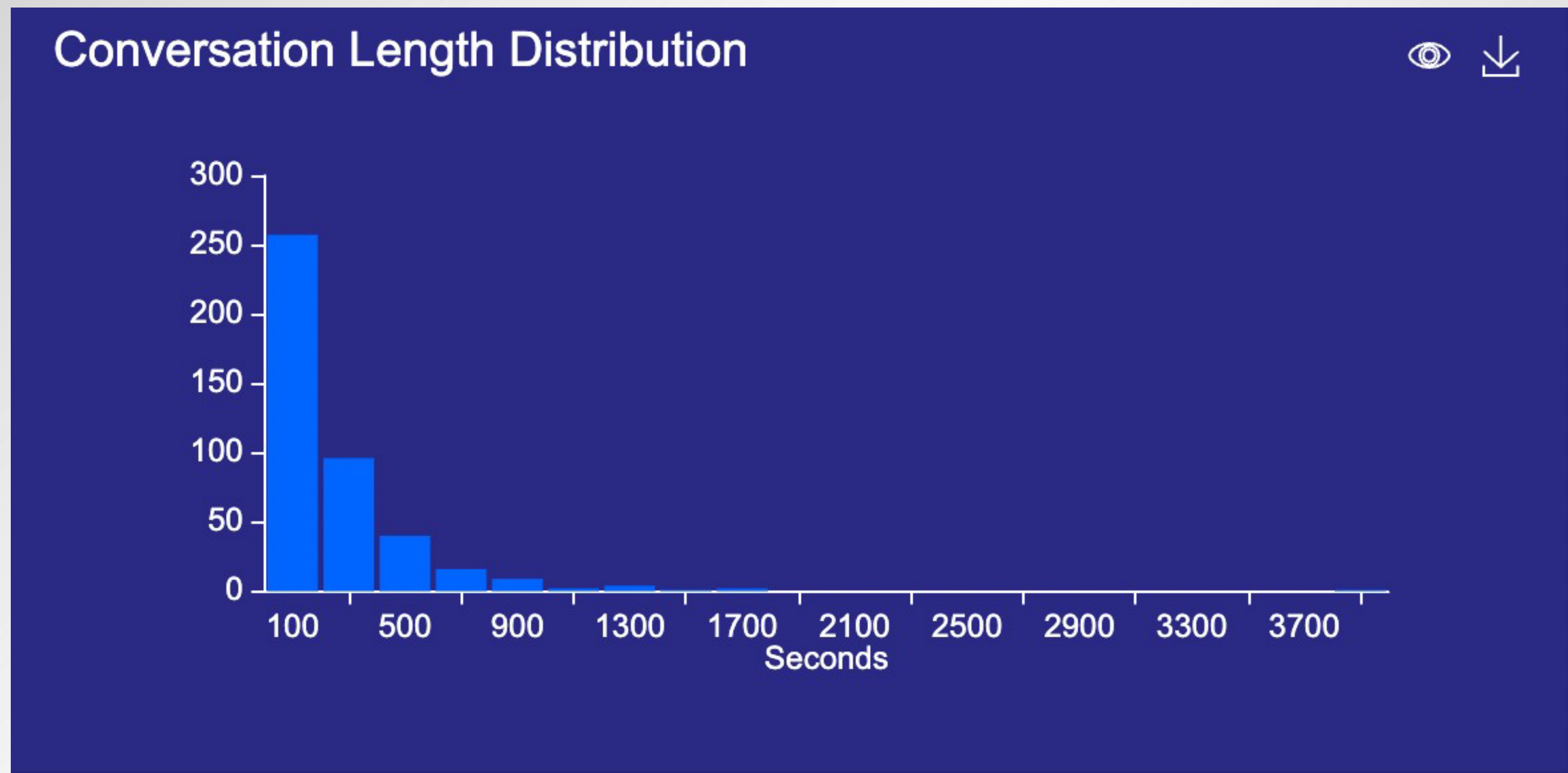
Session - Conversation count

1 221 total conversations across all 4 languages.

- Spanish - 583
- English - 277
- Portuguese - 343
- French - 18

Conversation Lengths - English

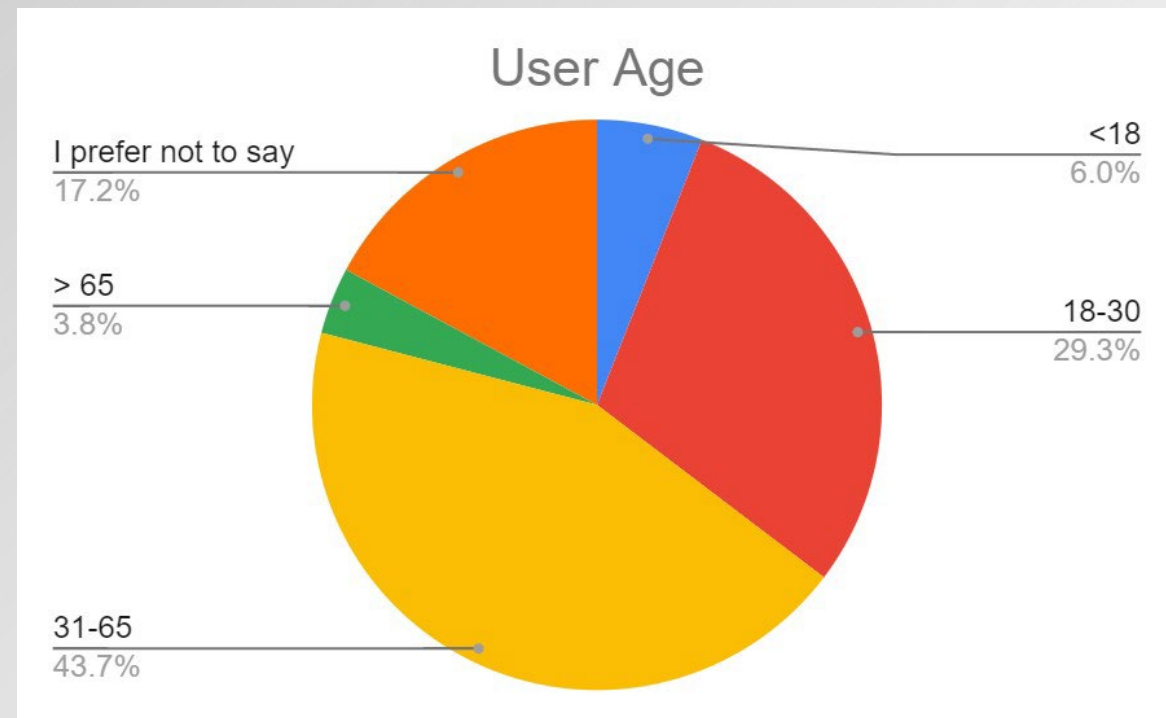
This graph shows the amount of conversations in relation to the length (in seconds) of the conversations.



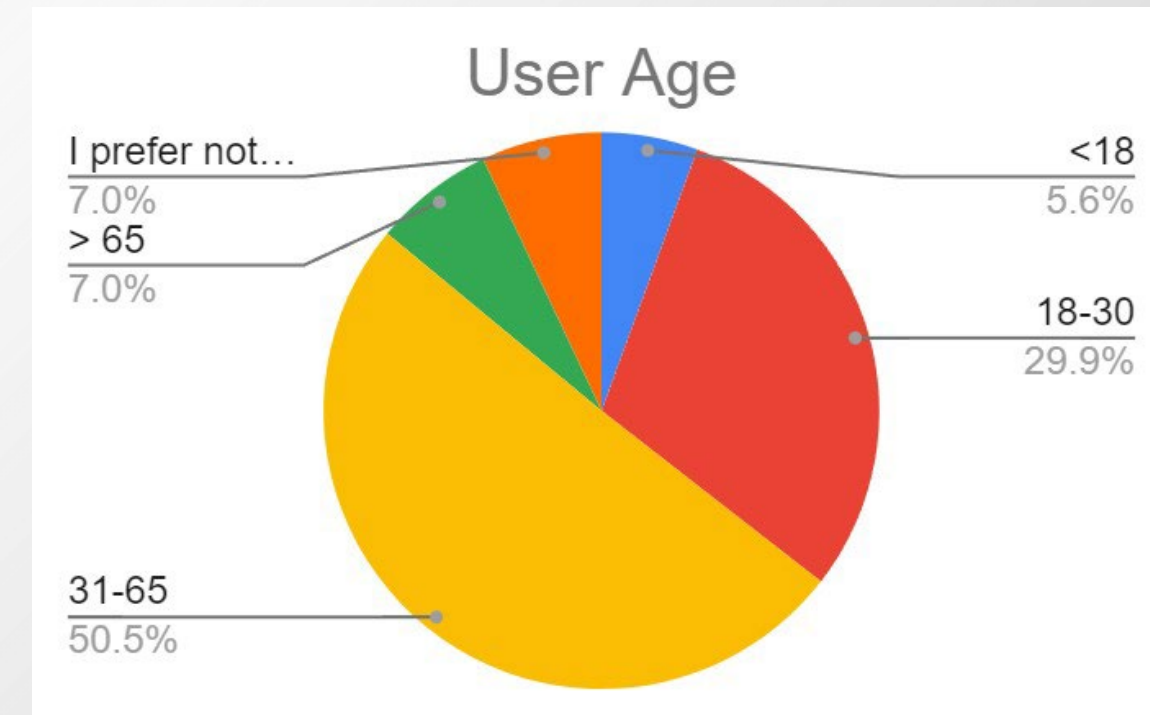
User Age

These graphs represent the age group category selected by the users for node 0.2.1.

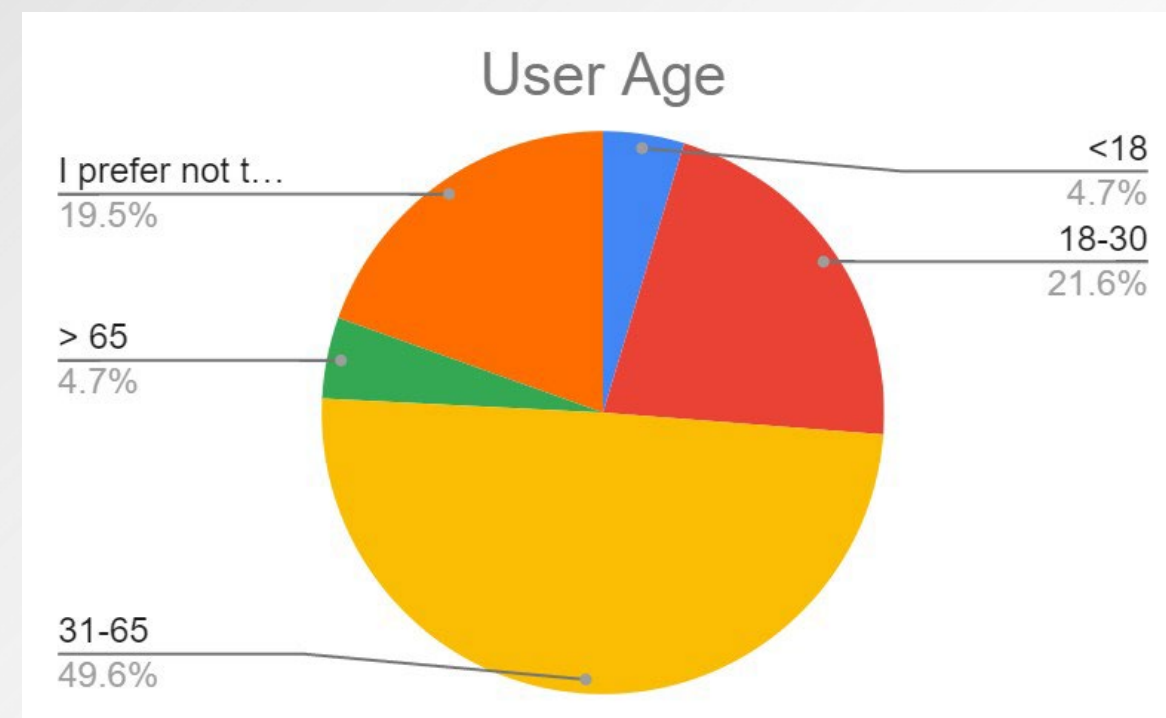
SPANISH



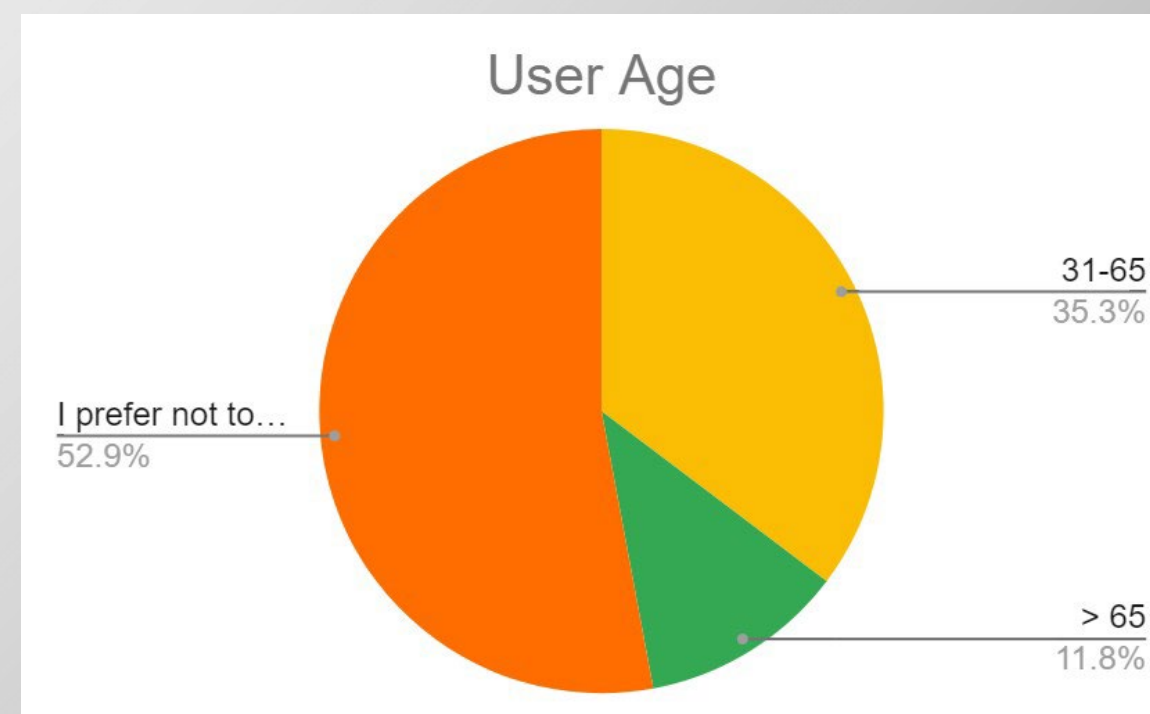
ENGLISH



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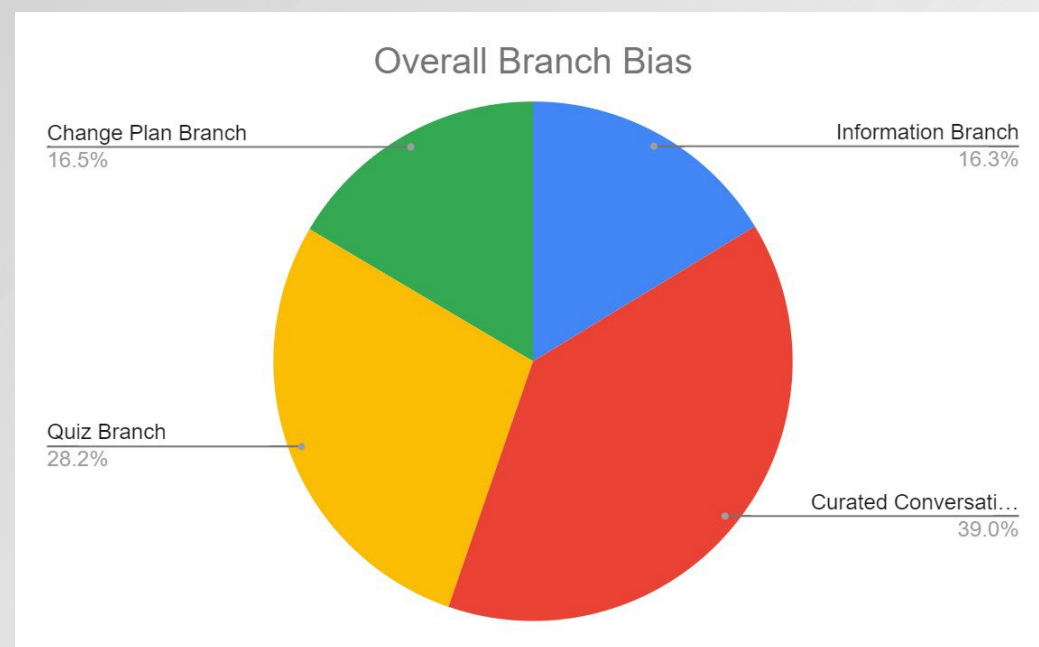
FRENCH



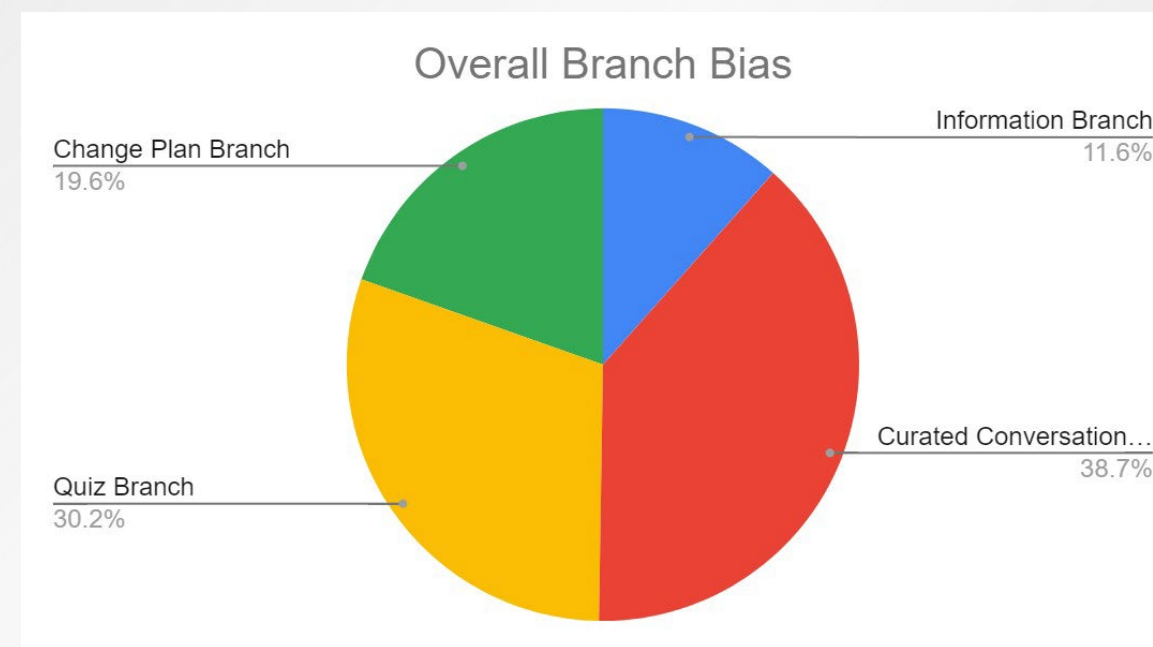
Overall Branch Bias

Ratio of users that moved from the Welcome/Rapport nodes to one of the following Branches

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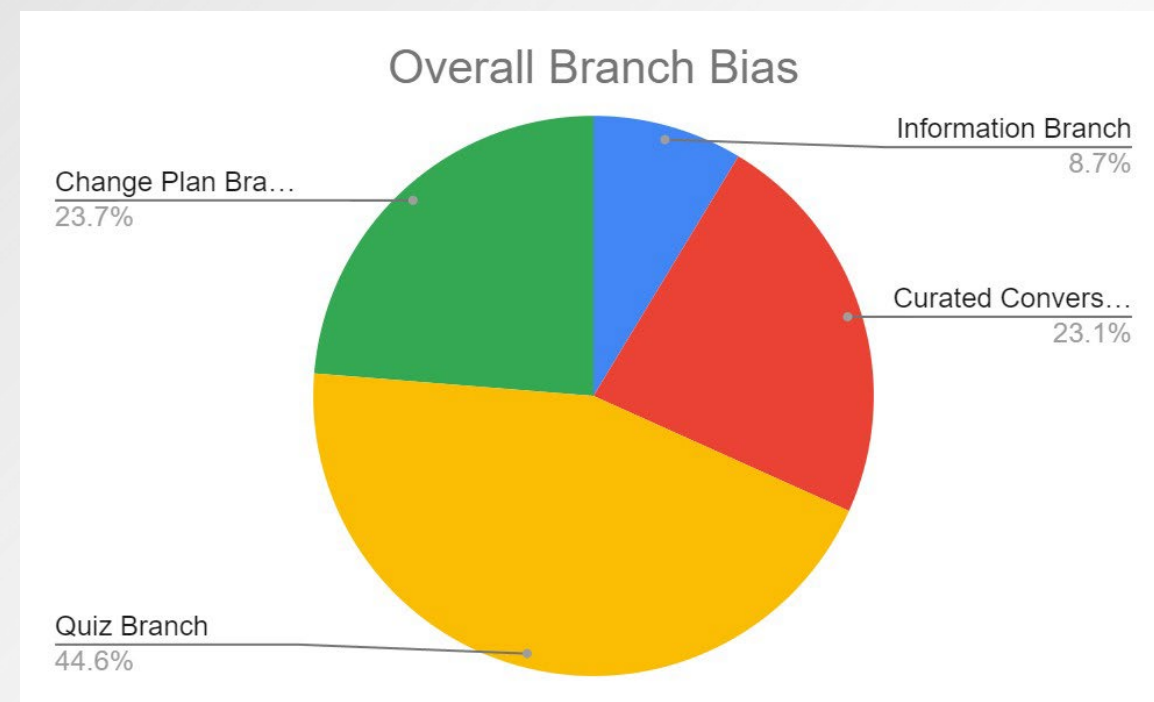
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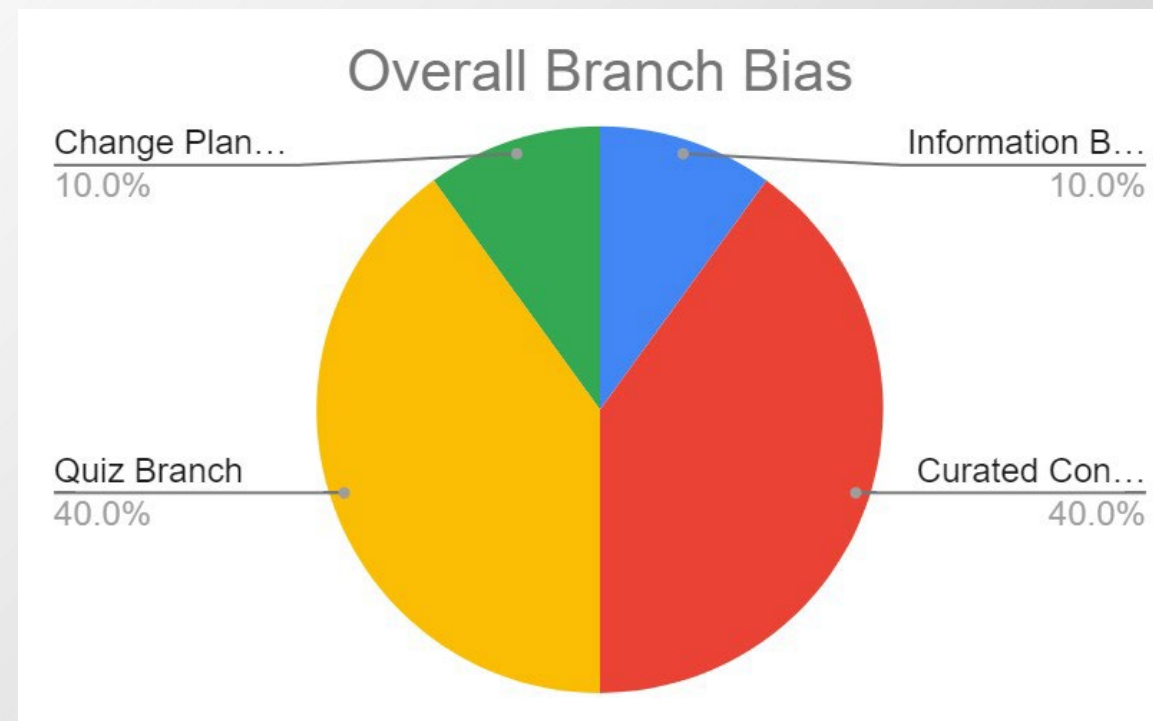
Key:

- Curated
- Info
- Quiz
- Change

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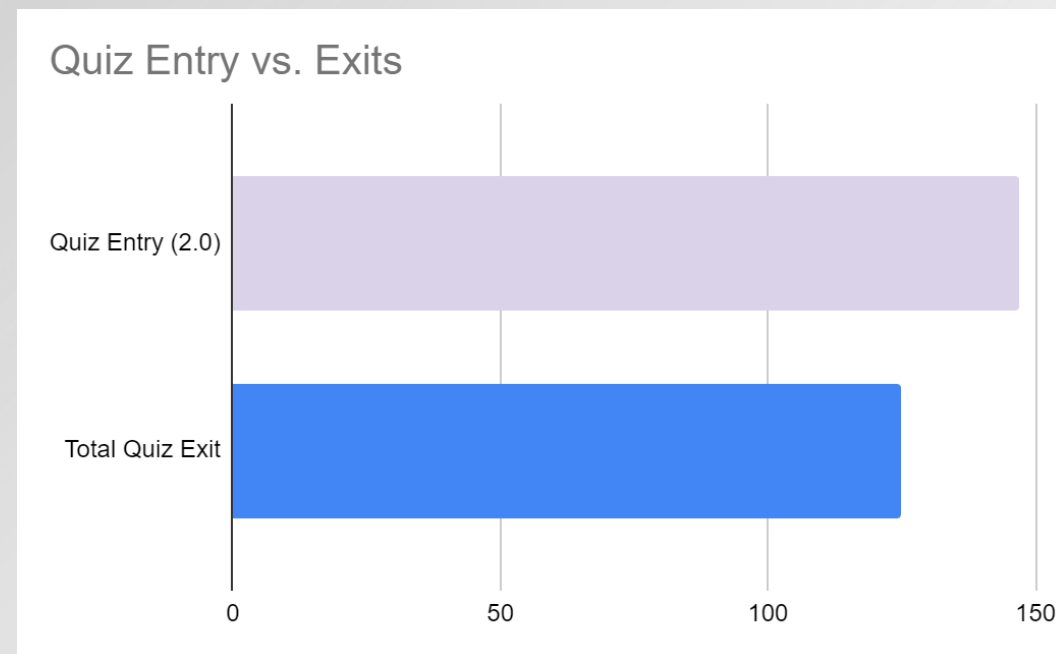
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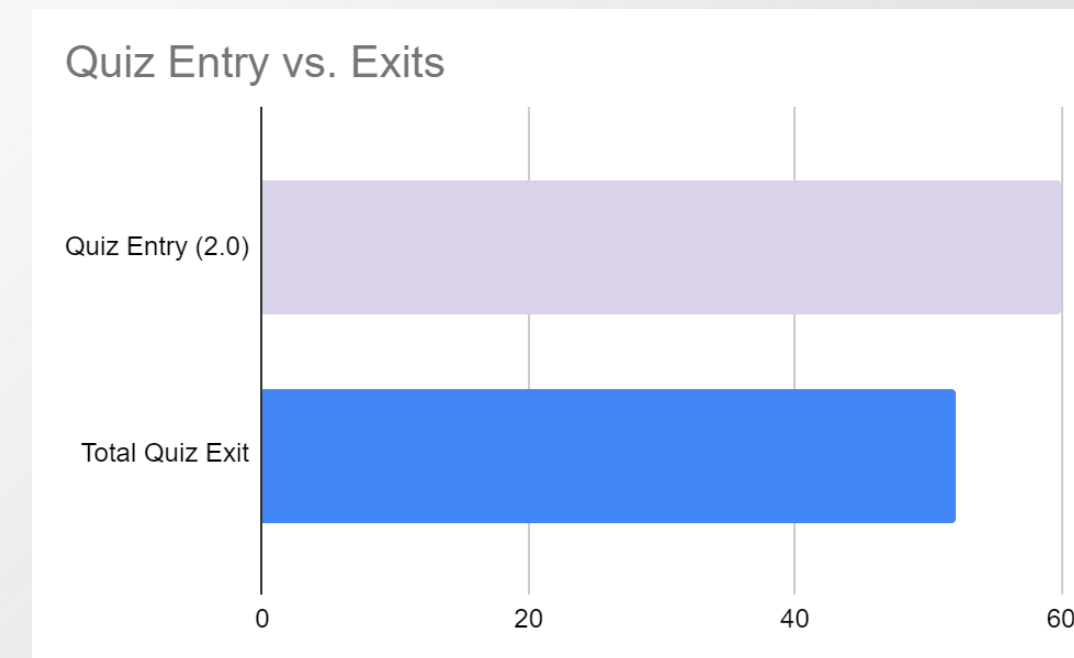
Quiz Branch - User retention

The number of users that entered the Quiz Branch in relation to the number of users who finished the quiz.

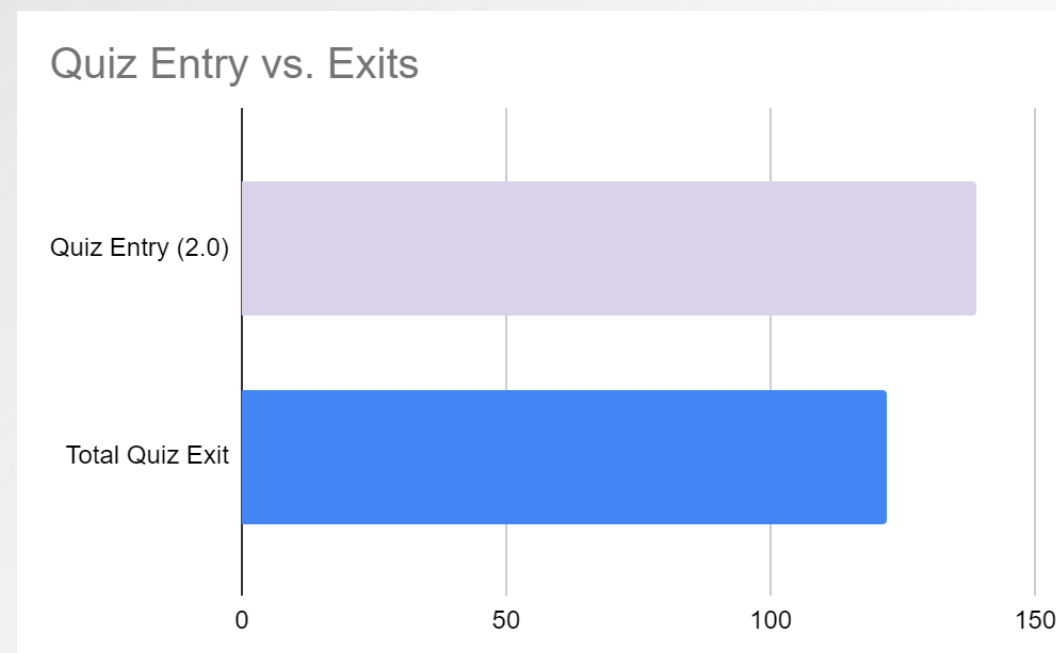
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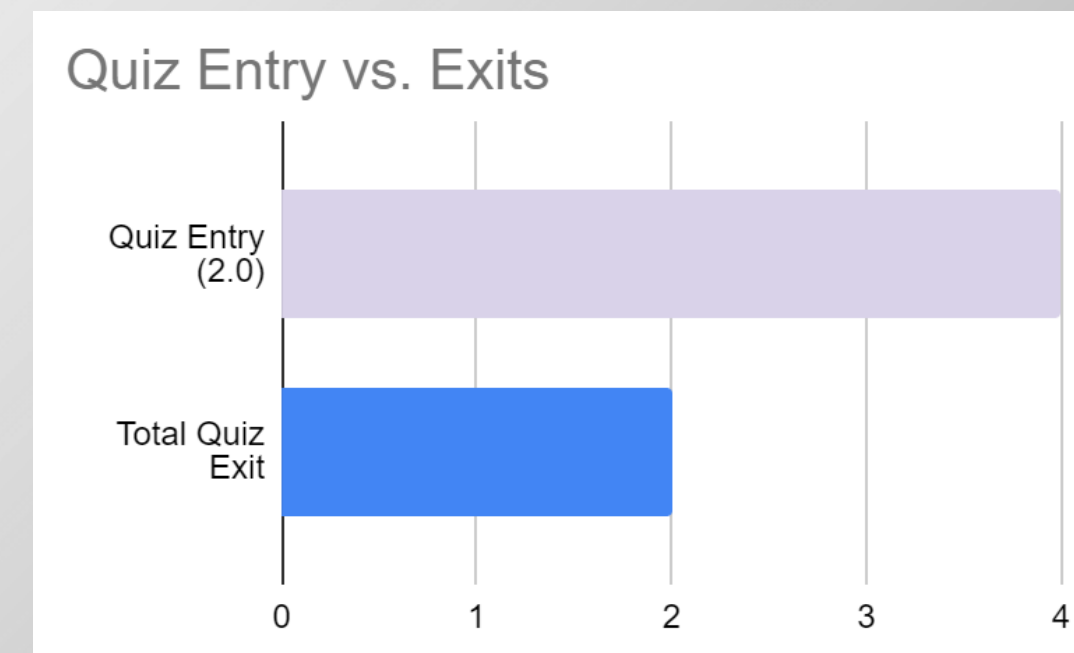
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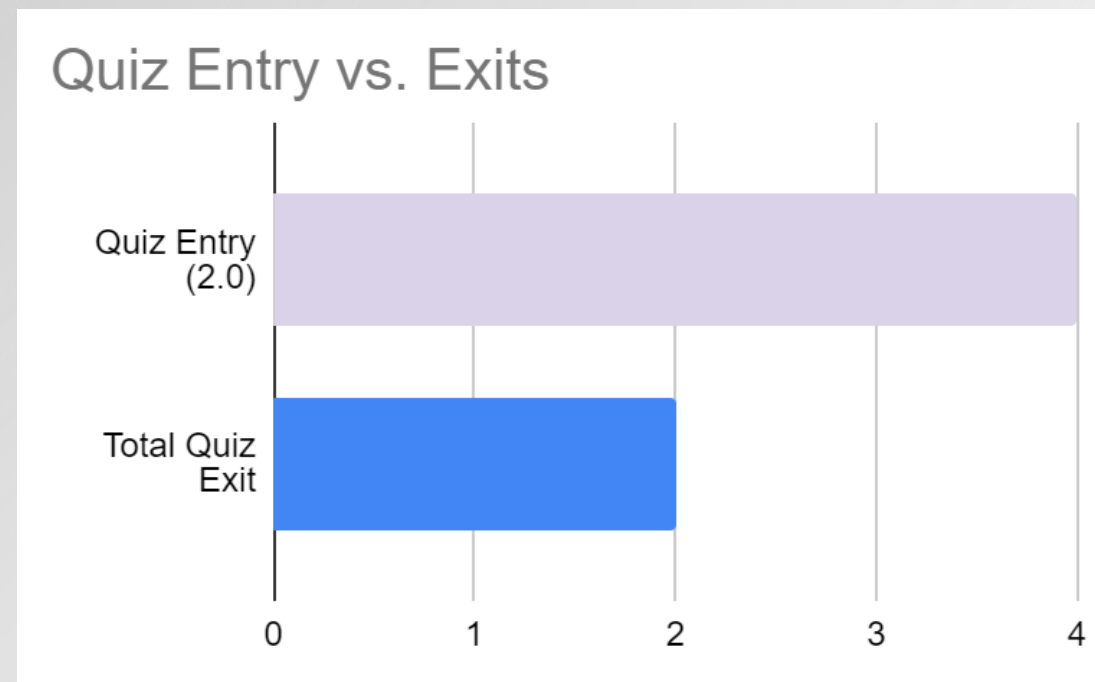
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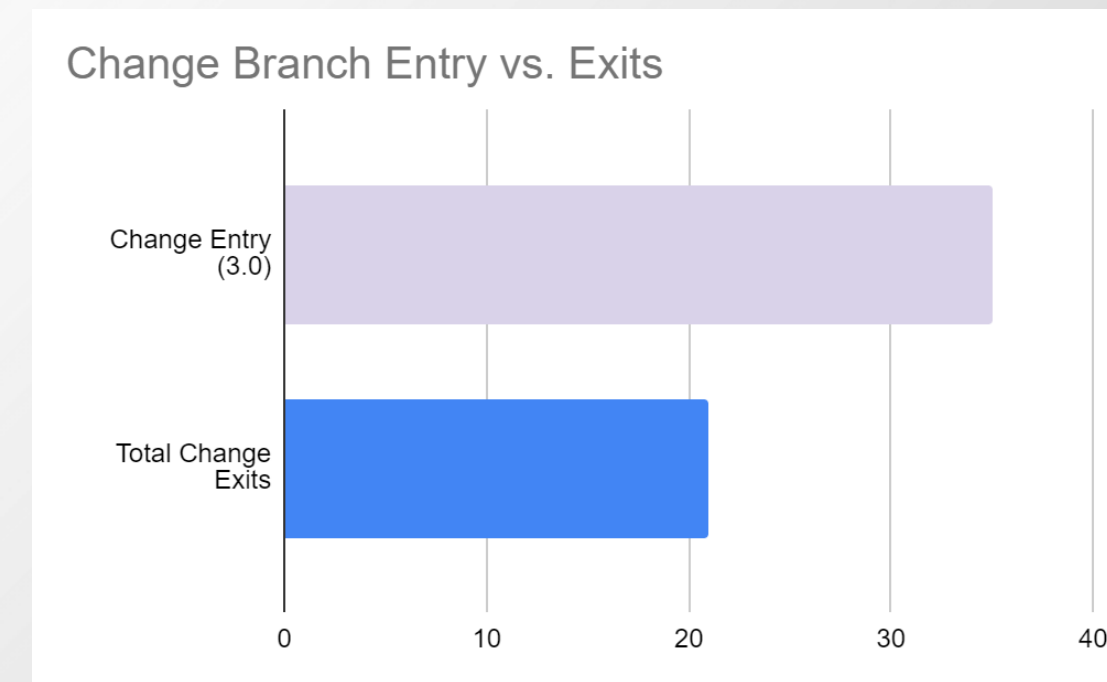
Change Branch - User retention

The number of users that entered the Change Branch in relation to the number of users who finished.

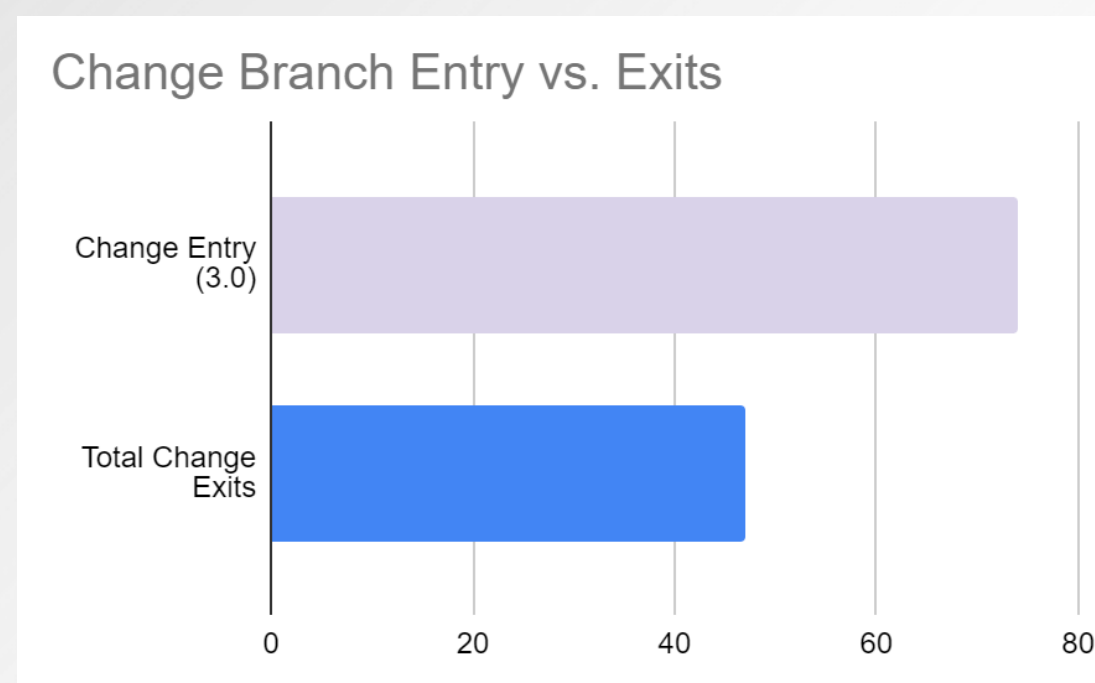
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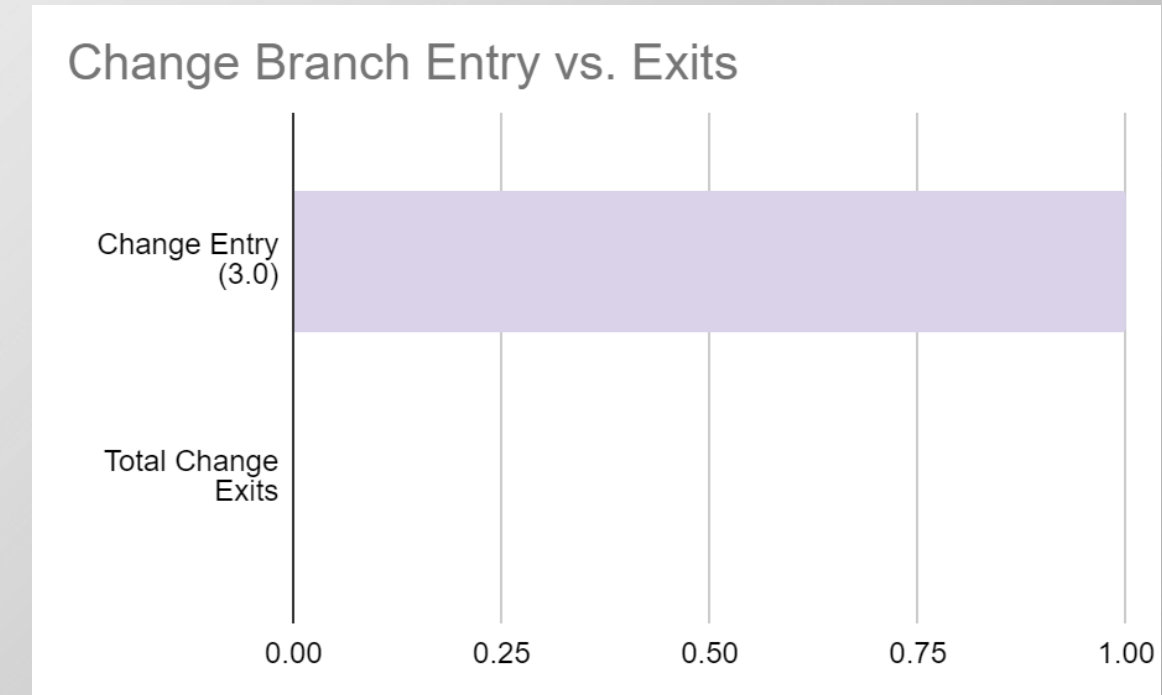
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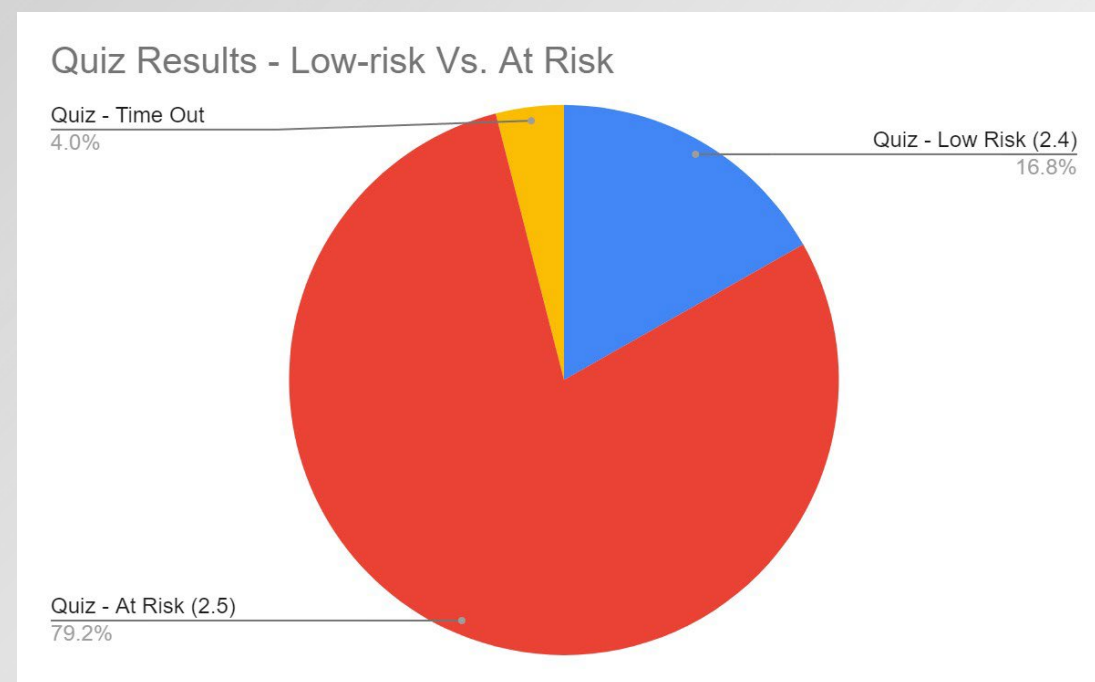
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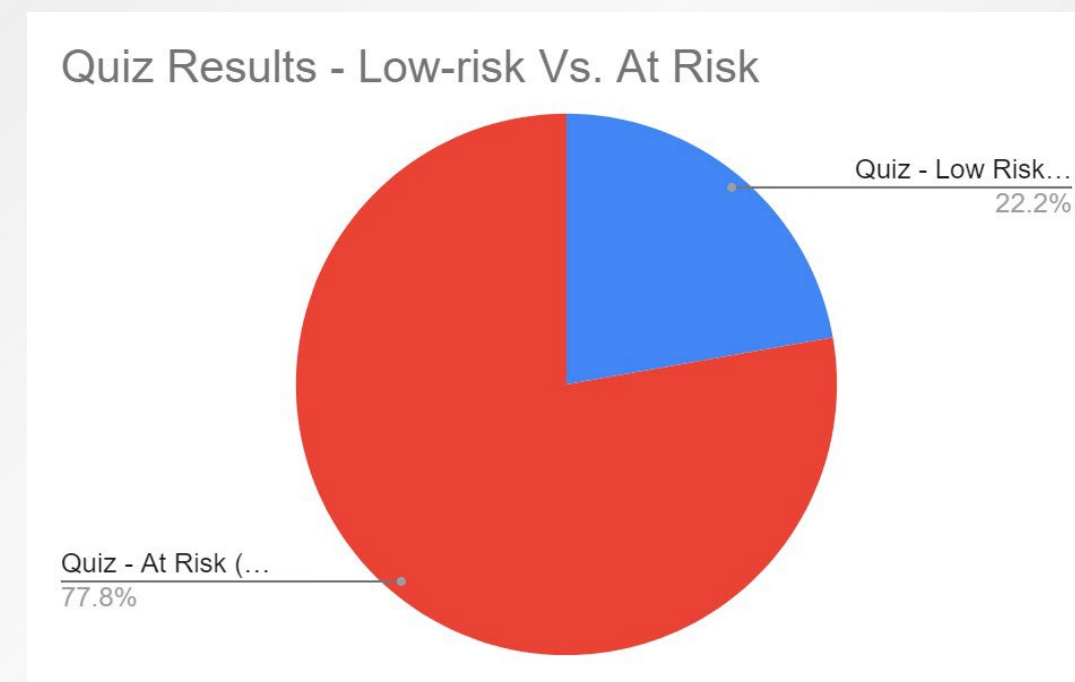
Quiz Branch - Results

The ratio of results-based users that completed the quiz.

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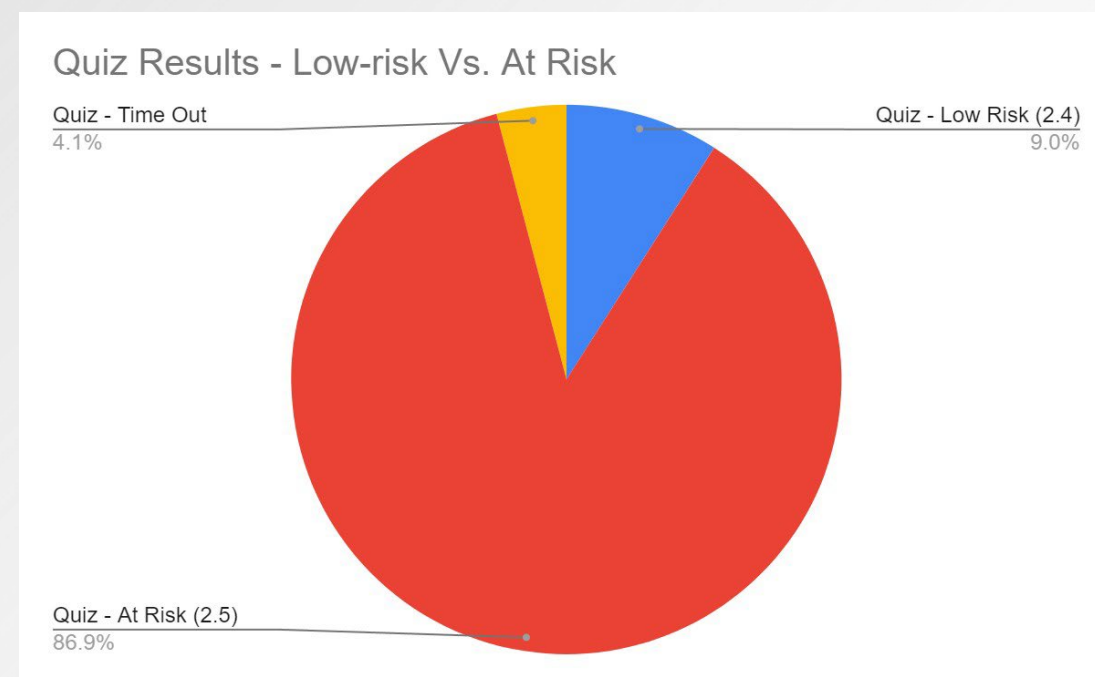
ENGLISH



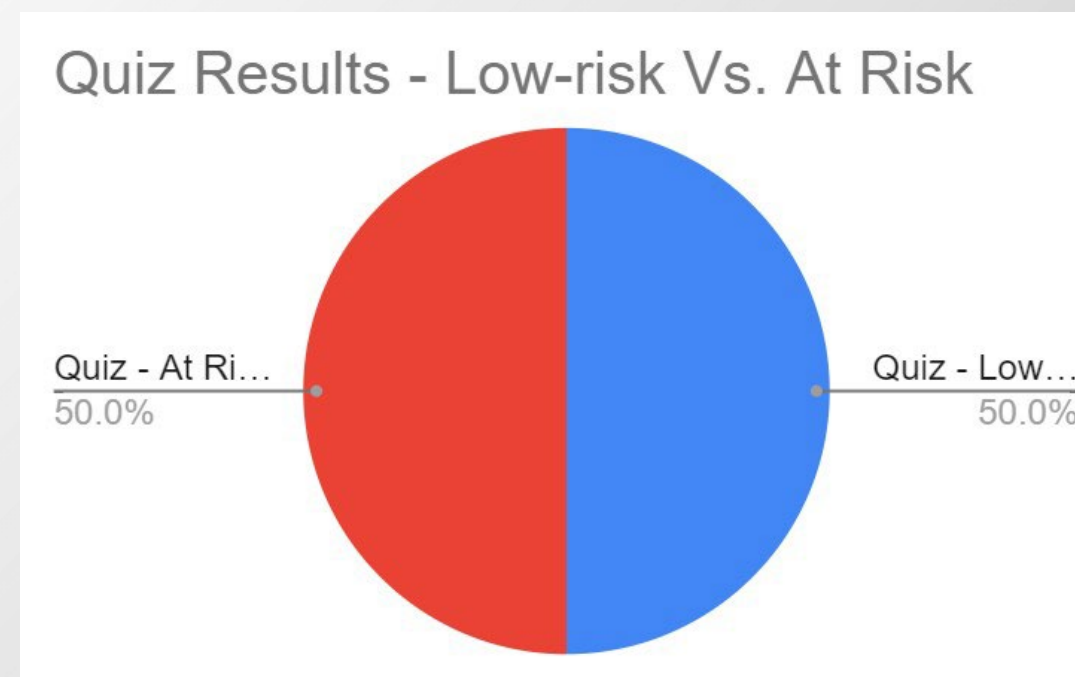
Key:

- At Risk
- Low-risk
- Time Out

PORTUGUESE



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#LiveBetterTakeAction 2022 VS #LiveBetterDrinkLess 2021

#LiveBetterTakeAction

(10 October 2022 - 6 December 2022)

- Global mentions: **1.6K**
- Global impressions: **42M**
- Number of PAHO's social media posts: **90**
- Reach: **2.8M** directly reached through PAHO's owned media channels
- Engagements: **122K**
- Budget for social ads: **USD 2500**

#LiveBetterDrinkLess

(8 November 2021 - 16 January 2022)

- Global mentions: **1.8K**
- Global impressions: **54M**
- Number of PAHO's social media posts: **81**
- Reach: **4M** directly reached through PAHO's owned media channels
- Engagements: **31.2K**
- Budget for social ads: **USD 3000**

Lessons Learned and Moving Forward

- Long term goals and investment are needed
- May need to separate the purpose of the agent (education vs SBI) to better understand the user experience
- Need for more user involvement in design and testing
- There is a need to place AI within health systems or close to specific target populations for testing and use along with health professional help
- Distrust in AI may be a great barrier that needs to be properly addressed, along with ethical principles and designed conversations
- Need to 'mainstream' use of digital agents to gain public trust
- Potential as a digital trainer to professionals
- Expand to other areas: health promotion, other substances, mental health
- The momentum is ripe for much research in the field of AI applications

Thank you!
Questions?