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# Networks of Disinformation: The Proliferation of Hate Speech in Chile and Colombia During the Venezuelan Migration Crisis

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# Networks of Disinformation: The Proliferation of Hate Speech in Chile and Colombia During the Venezuelan Migration Crisis



Isabelle Valdes Dr. Erika Frydenlund





# Introduction

- Mentee of Research Assistant Professor, Dr. Erika Frydenlund from the Virginia Modeling, Analysis, and Simulation Center
  - + colleagues at VMASC and the Universidad del Norte in Colombia
  - + cohort members in the WS-DL lab
- Senior at the University of California, Berkeley, studying Political Science, Data Science, and Spanish







# Venezuelan Refugee and Migrant Crisis

- The largest recorded refugee and migrant crisis in the Americas, over 6 million people displaced. (World Bank)
- Colombia and Chile have the first and fourth highest number of Venezuelan migrants, respectively.
- Prevailing perception that Venezuelan migrants are bringing crime, although crime data says otherwise.
- Instances of extreme anti-Venezuelan sentiment, protests, and hate crimes in both countries.







# Methodology

## **Hashtag/Keyword Selection**

 Consult fact checking organizations in Colombia and Chile, such as ColombiaCheck

### Twitter query:

- One or more:
  - Veneco
  - Venecos
  - Veneca
  - Venecas
  - NoMasVenezolanos
  - VisaALosVenecos
  - FueraVenecos
  - NoMasVenecos
  - NoEsInmigracionEsInvasion
  - Fueralnmigrantesllegales
  - VenecoEsSicariato

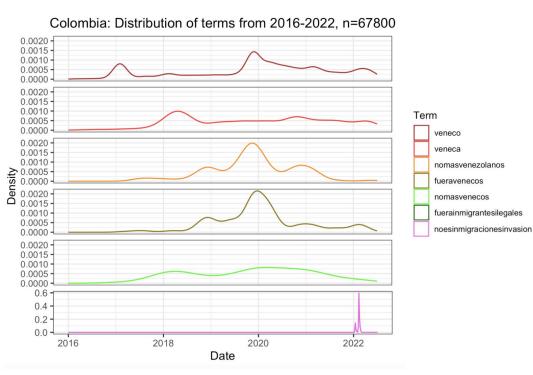
## Twitter query cont:

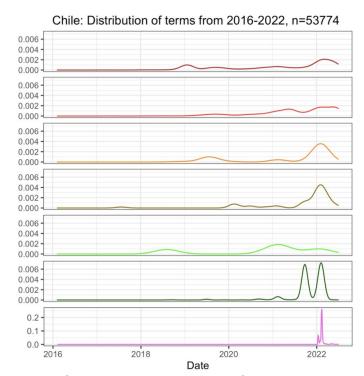
- Place indicator
  - (colombia OR place\_country:CO)
  - (chile OR place\_country:CL)
- Language indicator
  - lang:es
- Date filter
  - 2016-01-01 to 2022-07-01





# Beginning of term use corresponds to increase in arrival of migrants



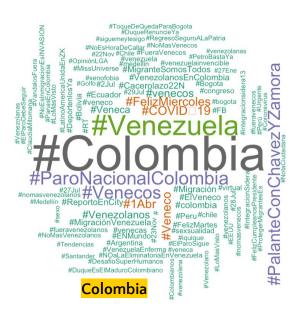


The number of Venezuelans in Colombia doubled in less than four months, from 300,000 in June 2017 to 660,000 in the end of November 2017.

The number of Venezuelans in Chile grew from 83,000 in 2017 to 289,000 in 2018, and further to 455,000 in 2019. 5



# Negative sentiment towards Venezuelans is communicated differently across countries



### **Colombia**

- Hashtags are more general
- Most hate speech communicated outside of hashtag network

# Chile

- Hashtags contain negative sentiment
- Tied to specific events



#NomasinmigracionIlegal

Chile

#ChileEsUnoSolo

#BastadeNarcotrafico





# Sentiment analysis with PySentimiento

# **Positive**

# **Neutral**

# **Negative**











# Hate-speech analysis with PySentimiento

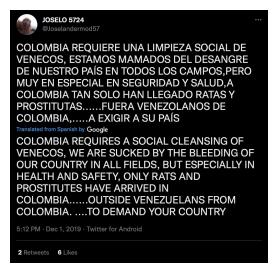
# Hateful

# Ornella #RepublicanaDe Ornella #RepublicanaDe Ornella #RepublicanaDe OrnelaTheCat En 30 años Venezuela No había tenido un % tan bajo de delincuencia y asesinatos, saben por qué ? El hdp de Maduro los mando a los delincuentes a Chile, #NoEsInmigracionEsINVASION Translated from Spanish by Google In 30 years Venezuela had not had such a low percentage of crime and murder, do you know why? Maduro's hdp sent the criminals to Chile, #NoEsInmigracionEsINVASION 3:49 AM · Feb 11, 2022 · Twitter for iPhone

# **Targeted**



# **Aggressive**





How do the cultural differences of Colombia and Chilean disinformation networks reflect the limitations of sentiment analysis algorithms?

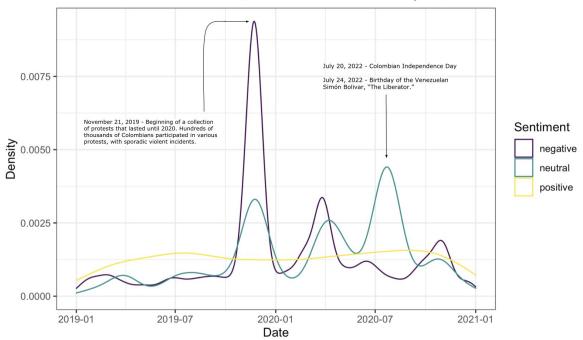




# Sentiment analysis results for Colombia

Sentiment	Proportion of Tweets
Positive	0.007
Neutral	0.256
Negative	0.747

### Colombia: Distribution of Sentiment from 2019-2021, n=32156





# But the PySentimiento algorithm is not totally accurate



Both of these tweets had some of the highest numbers of retweets on November 23, contributing to a large spike in negative sentiment



AnalyzerOutput(output=NEG, probas={NEG: 0.817, NEU: 0.160, POS: 0.024})

AnalyzerOutput(output=NEG, probas={NEG: 0.753, NEU: 0.244, POS: 0.003})

AnalyzerOutput(output=['hateful'], probas={hateful: 0.787, targeted: 0.038, aggressive: 0.425})

 $AnalyzerOutput (output = ['hateful', 'aggressive'], probas = \{hateful: 0.930, targeted: 0.023, aggressive: 0.641\}) \\$ 



# Conclusion: Social media use is significantly different across countries, so our disinformation research must be, too.

- Emergence of negative sentiment towards Venezuelans correlate with the arrival of migrants in one's own country, not the beginning of the global crisis itself.
- Chile: Widely used hashtags proliferate hate speech
- Colombia: Usage of slurs signal hate speech
- We need more nuanced approaches to disinformation research
  - Better variety in Spanish language sentiment-analysis algorithms
    - Tweets that counteract disinformation/hate-speech were flagged as negative and/or hate speech
    - PySentimiento model, roBERTuito trained with 500 mil tweets, but no country distinction.
  - Hate speech, disinformation or both?