



Minería de Texto para Monitorear el impacto de Covid-19 en América Latina

Msc. Josimar Chire

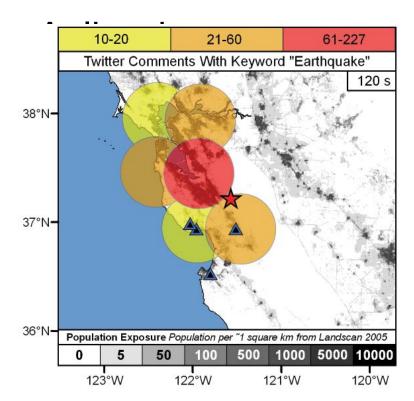


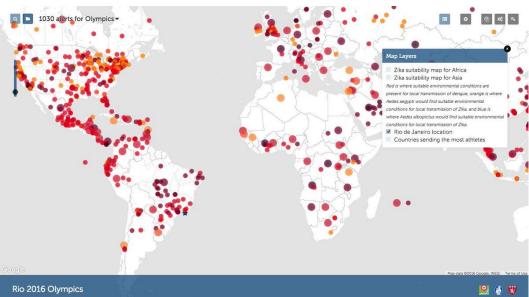
Latin American Meeting In Artificial Intelligence

Khipu





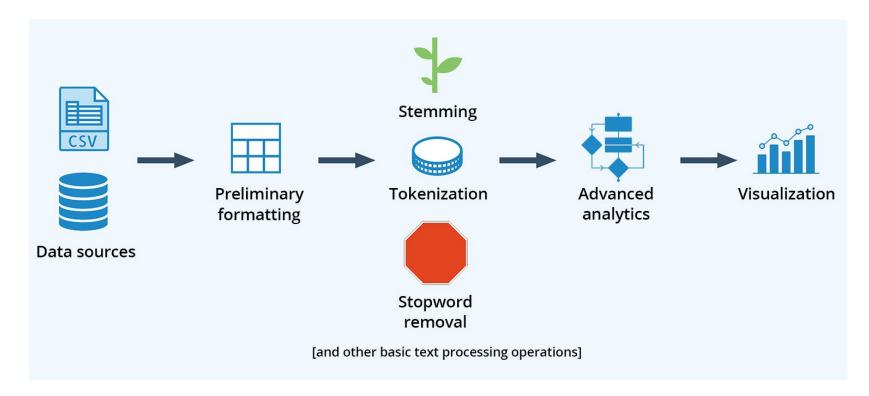




Social Sensors



Text Mining



What is the people posting about symptoms related to Coronavirus in Bogota, Colombia

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https://arxiv.org/pdf/2003.11159.pdf

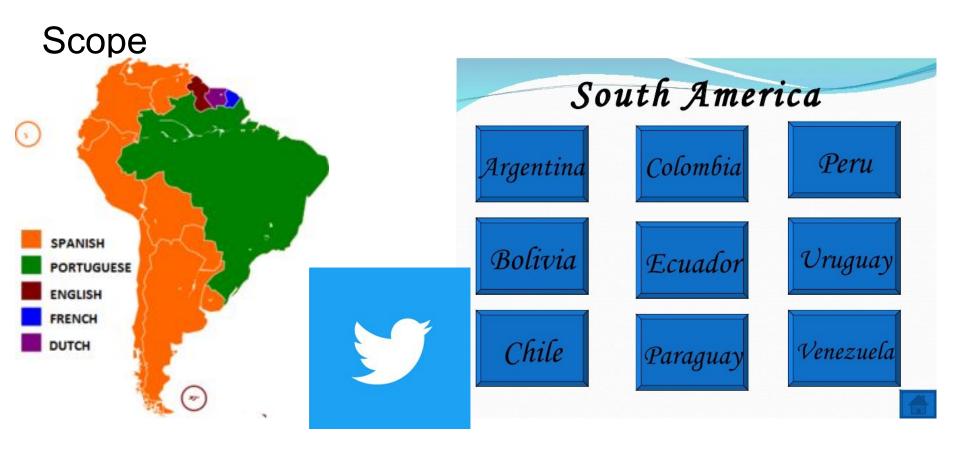
Infoveillance based on Social Sensors to Analyze the impact of Covid19 in South American Population

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ABSTRACT

Infoveillance is an application from Infodemiology field with the aim to monitor public health and create public policies. Social sensor is the people providing thought, ideas through electronic communication channels (i.e. Internet). The actual scenario is related to tackle the covid19 impact over the world, many countries have the infrastructure, scientists to help the growth and countries took actions to decrease the impact. South American countries have a different context about Economy, Health and Research, so Infoveillance can be a useful tool to monitor and improve the decisions and be more strategical. The motivation of this work is analyze the capital of Spanish Speakers Countries in South America using a Text Mining Approach with Twitter as data source. The preliminary results helps to understand what happens two weeks ago and opens the analysis from different perspectives i.e. Economics, Social.



^{*}https://upload.wikimedia.org/wikipedia/commons/thumb/c/c9/Languages_of_South_America_%28eng%29.png/250px-Languages_of_South_America_%28eng%29.png

Query Paramenters

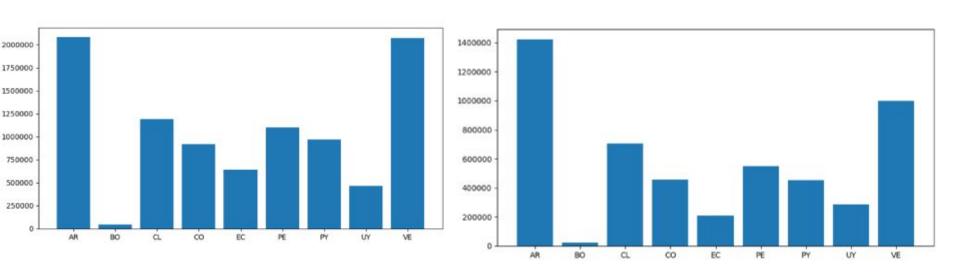
- date: 08-03-2020 to 31-03-2020
- terms: 'coronavirus','covid19' and variations with @, #, -, _
- geolocalization: the longitude and latitude of every capital
- language: Spanish
- radius: 50 km

How the data is?(CO)

text
rt @nachogomex neumologos y virologos alertan el panico al coronavirus produce una baja de defensas que nos haria mas debiles fre-
rt @ariasvilla que el coronavirus no nos lleve a olvidar a los virus que coronaron
rt @delacallehum eso del coronavirus que va vean las cifras hemos pasado por la gripa asiatica porcina vacas locas sars h5n1 aviar
estados unidos sin sistema de sanidad publica y a lebron se la suda el coronavirus
rt @delacallehum eso del coronavirus que va vean las cifras hemos pasado por la gripa asiatica porcina vacas locas sars h5n1 aviar
rt @hypomania el coronavirus viendo el antibacterial que compraste en d1
rt @delacallehum eso del coronavirus que va vean las cifras hemos pasado por la gripa asiatica porcina vacas locas sars h5n1 aviar
rt @delacallehum eso del coronavirus que va vean las cifras hemos pasado por la gripa asiatica porcina vacas locas sars h5n1 aviar
rt @tatislondono o sea dejenme entender inocularon el coronavirus en la nin a para que saliera positiva ayer o estaba escondida para e
un dato acabo de pasar por @eltiempo y el de la informacion es covid 10 deportes y relleno extran ame

created at	
2020-03-08	#Iomasleido actualidad tapabocas sirve evitar coronavirus respuestas virologa
2020-03-08	preparada region enfrentar coronavirus
2020-03-08	alto turmeque semana coronavirus viajes intrigas judiciales
	preparada region enfrentar coronavirus
2020-03-08	fotos venecia ciudad fantasma temor coronavirus
2020-03-08	hacer si sospecha coronavirus
	pasando coronavirus nivel mundial aqui contamos
	italia aisla mas millones personas frenar coronavirus
	pasando coronavirus nivel mundial aqui contamos
	papa reza traves streaming emergencia coronavirus italia
	aplicacion gobierno colombiano informa coronavirus
	viajes aereos verian peor an historia coronavirus
2020-03-08	francia prohibe reuniones mas mil personas evitar contagios coronavirus via @elespectador

How many posts per country?



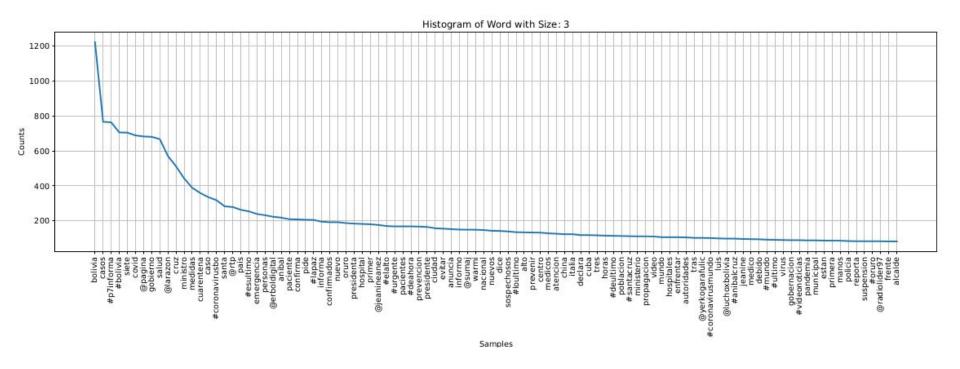
> 8 millions of tweets

^{*}https://www.medrxiv.org/content/10.1101/2020.04.06.20055749v1

Who are 11 Top users per capital?

Name	Nicknames					
Argentina	Portal Diario, Clarin, Radio DoGo, Camila, El Intransigente, Agustina, Pablo, #FrenteDeTodos,					
	Ale,Lucas, Diario Cronica					
Bolivia	Pagina Siete, La Razon Digital, Radio SPLENDID, RTP Bolivia, FmBolivia, Radio Lider 97 FM,					
	Bolivia Social ,El Alto Se Respeta, Javierdeltoro, Red Bolivision,Bolivia.com					
Chile	Cooperativa, Fabian Parraguez, Fernando Luis, #YoApruebo, Publimetro, Felipe, 24 Horas					
	, Cristian, Rodrigo, #RenunciaPi era, Pablo					
Colombia	El Espectador, EL TIEMPO, Radio Nacional CO, Juan, La FM, Diario La Republica,					
	Erika Fontalvo, RCN Mundo, Roberto Salazar, La vida es bella, Canal Citytv,					
Ecuador	Teleamazonas, Primicias, Pichincha Comunicaciones, Marieta Ocampo, Roque Rivas Zambrano,					
	Ricardo Paredes Egas, Edicion Medica Ec, Patricio eguez, Alfonso Parraga, Cristian Mosquera					
Paraguay	ARTexpress, Victor Araujo, Marcos Ozuna, Radio anduti, ABC Cardinal 730 AM,					
	Leli Ramirez Lugo, CPeraltaSocialMedia,Fernando Nu ez, ultima Hora,					
	Graciela Jacqueline Ricciardi Paredes, Zoraida Palacios					
Peru	Agencia Andina, Diario La Republica, Luis VF, El Comercio, Diario Trome,					
	Diario Correo, Diario Gestion, Jose, Luis, Libero, Gizlaine					
Uruguay	Agence France-Presse, El Observador, Telemundo, Luis, Carlos, Rita Montelongo,					
1000 100	Pablo, Adriana, Teledoce #QuedateEnCasa,Alfredo Badolati (Badoleitor 5.0), dianarocio17					
Venezuela	CaraotaDigital, DolarToday, El Nacional, Maduradas.com, El Cooperante,					
	AlbertoNews, TalCual, Efecto Cocuyo, teleSUR TV, ultimas Noticias, Runrunes					

What are the most Frequent Terms? (BO)



^{*}https://www.medrxiv.org/content/10.1101/2020.04.06.20055749v1

Cloud of Words per week(Ar, Bo, Cl, Co)



Covid19 Surveillance in Peru on April using Text Mining

Hope Amid of a Pandemic: Is Psychological Distress Alleviating in South America while Coronavirus is still on Surge?

Characterizing Twitter Interaction during COVID-19 pandemic using Complex Networks and Text Mining

Locimar Edinson Chira Saira

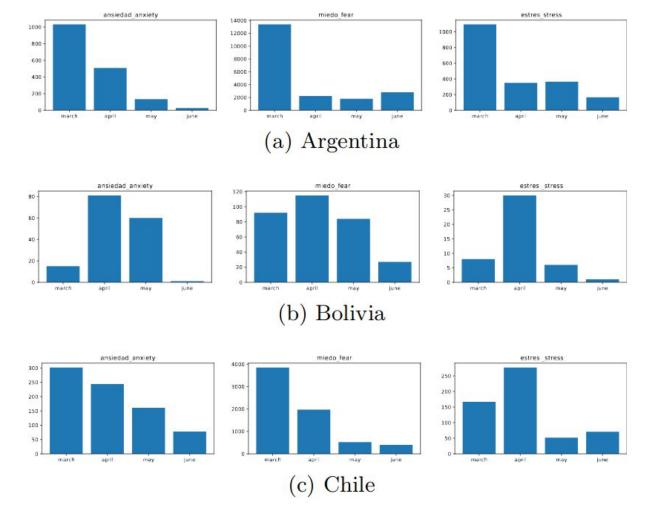
Infoveillance to Analyze Covid19 Impact on Central America Population

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Text Mining Approach to Analyze Coronavirus Impact: Mexico City as Case of Study

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https://arxiv.org/pdf/2008.12289.pdf

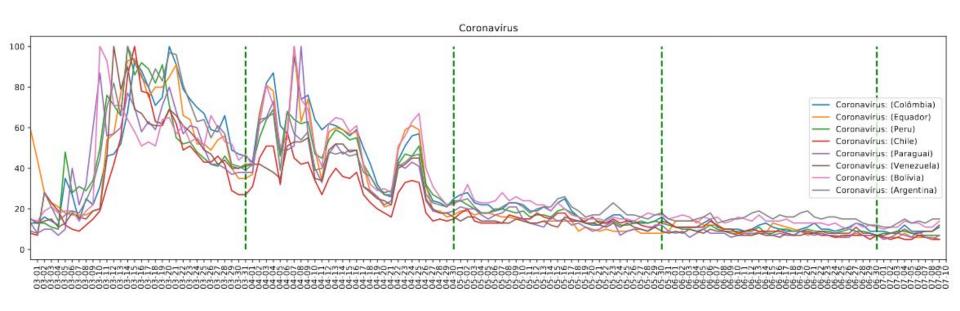
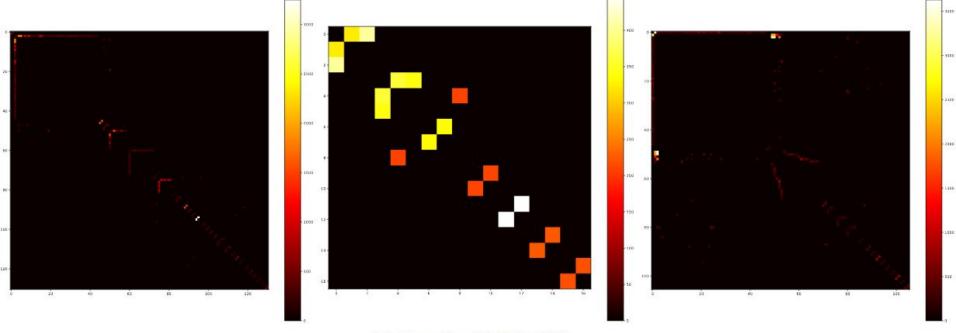


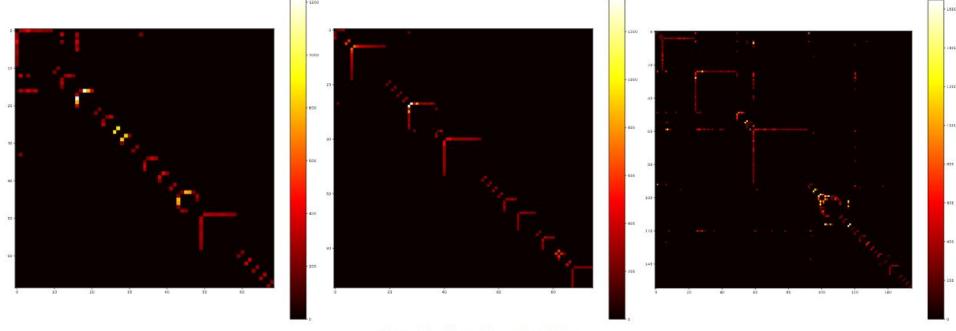
Fig. 5: Google Trends with search term coronavirus (vertical dashed lines separates the months)

TABLE I: Description of Dataset

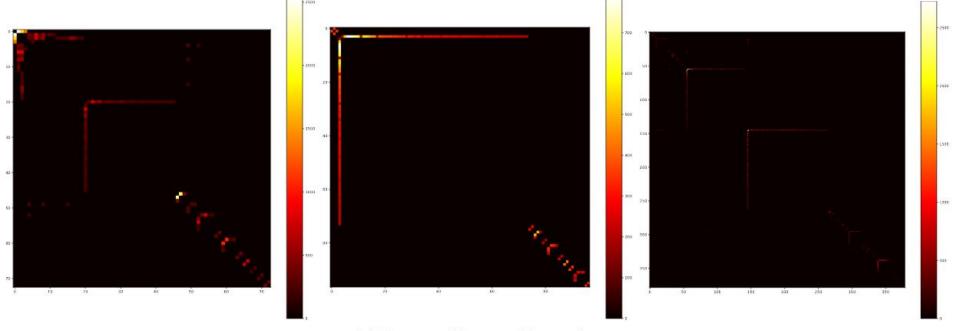
	Capital	Latitude	Longitude	Tweets	Unique Users
Argentina	Buenos Aires	-34.583	-58.667	3872212	749842
Bolivia	La Paz	-16.5	-68.15	134605	21850
Chile	Santiago	-33.45	-70.667	3146307	309351
Colombia	Bogota	4.6	-74.083	1688045	315794
Ecuador	Quito	-0.217	-78.5	836017	102979
Paraguay	Asuncion	-25.267	-57.667	1628146	156384
Peru	Lima	-12.05	-77.05	2054415	287261
Uruguay	Montevideo	-34.85	-56.167	826405	192381
Venezuela	Caracas	10.483	-66.867	4102893	305684



(a) Argentina, Bolivia, Chile



(b) Colombia, Ecuador, Peru



(c) Paraguay, Uruguay, Venezuela

Analysis of internet trends related to medications for COVID-19 in ten countries with the highest number of cases

Josimar E. Chire Saire¹ Roselyn Lemus-Martin²

Conclusions

- Twitter is a useful source to get data about user, considering an infoveillance approach
- Top users are related to mass media: television, newspapers accounts.
- The performed analysis is a preliminary one and there is more work to do here.
- Same analysis can be replicated for other Regions, i.e. Central America,
 North America.

Sources

- Colombia https://arxiv.org/abs/2003.11159
- South America https://medrxiv.org/content/10.1101/2020.04.06.20055749v1
- Central America https://www.medrxiv.org/content/10.1101/2020.05.26.20113514v1
- Mexico https://www.medrxiv.org/content/10.1101/2020.05.07.20094466v1

What is the next?

- Perform the analysis from different approaches: Economy, Social, etc(On progress).
- Call people to contribute on this project(Open)



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Truth About Data Science Implementation

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- 1. Data is never clean.
- You will spend most of your time cleaning and preparing data.
 95% of tasks do not require deep learning.
- 4. In 90% of cases generalized linear regression will do the trick.
- 5. Big Data is just a tool.
- 6. You should embrace the Bayesian approach.
- 7. No one cares how you did it.
- 8. Academia and business are two different worlds.
- 9. Presentation is key be a master of Power Point.
- 10. All models are false, but some are useful.
- 11. There is no fully automated Data Science. You need to get your hands dirty.

Research4Tech

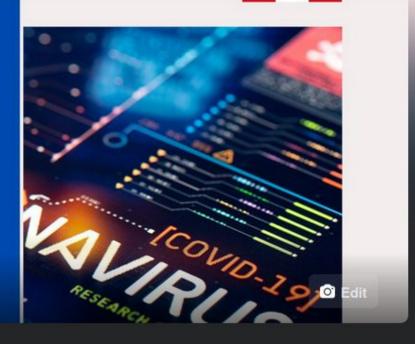
PROYECTO COVID19 LATAM

FFCHA: Viernes 29 de Mayo



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github.com/jecs89

https://www.researchgate.net/project/Text-Mining-to--Analyze-Covid19-influence-on-the-World/update/cr eate

Marzo

Asesoría de tesis

Día: sábado 06 de Marzo

Horario: 10h

