Geo-Visualization of Hotspot of Citizen Dissatisfaction on Social Services Using Media Print: Case Study of Fuel and Cash Scarcity in Nigeria.

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Introduction:

The recent expression of public dissatisfaction in Nigeria about the scarcity of cash and petrol has highlighted the crucial role that these resources play in a modern economy, and the scarcity of these resources can have a ripple effect on various aspects of society, including transportation, commerce, and daily living expenses. To facilitate efficient resource allocation during this crisis and better understand the effects on the citizens, we developed a data-driven solution that classifies media reports using NLP techniques, geocodes the locations present in the media report and uncovers the spatiotemporal patterns in fuel and cash scarcity over the years.

Figure 1: Image of the cash and fuel scarcity situation in Lagos source: punch news paper
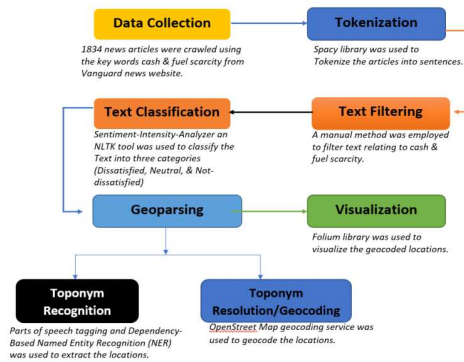
Materials and Methods

Figure 2: Methodology Flowchart
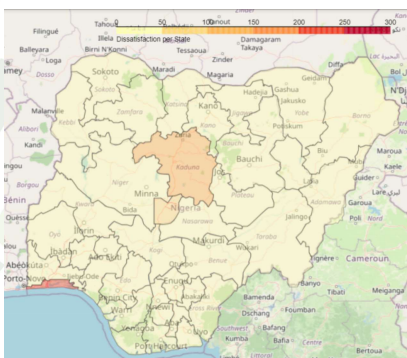
Results and Discussions

Figure 3: A map of Hotspot locations of citizens dissatisfaction over cash and fuel scarcity.
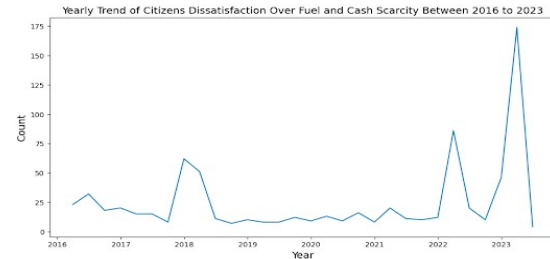

Figure 4: Map showing yearly trend of citizens dissatisfaction over cash and fuel scarcity in Nigeria.

State	Title	Brief_summary	Date_published	Classification	locations	latitude	longitude
Abuja Federal Capital Territory	Petrol queues resurface in Abuja over fear of price hike, scarcity	Long queues have resurfaced in Abuja filling states as motorists struggle to purchase Premium Motor Spirit, also known as petrol. The News Agency of Nigeria (NAN) reports that most fuel stations were locked while long queues were noticed in retail outlets in 'Wuse, Gwarimpa, Wuye and Kubwa expressway on Sunday. A private car owner, Mr [...]	2021 - 11 - 15	Dissatisfied	Abuja	9.0643305	7.4892974
Kaduna	Hajj 2019: Aviation fuel scarcity disrupts transportation of Nigerian pilgrims	The ongoing transporation of Nigerian pilgrms from Saudi Arabia has been disrupted due to the scarcity of aviation fuel (Jet A1) in the domestic market.	2019 -08-30	Dissatisfied	Kaduna	10.3825318	7.8533226
Lagos	Fuel Scarcity: Lagos bans indiscriminate queues at petrol stations	The Lagos State Government on Wednesday said it would no longer allow indiscriminate parking of vehicles on the road remarks across the state on the basis of queuing up for Premium Motor Spirit otherwise known as fuel, just as it threatened to sanction any erring filling stations and motorists who flout the exercise.	2016 -04-06	Dissatisfied	Lagos	6.4550575	3.3941795
Abuja Federal Capital Territory	CBN admits weak links in cash withdrawals, raises policy rate	Amidst the continued scarcity of cash under the Naira redesign policy the Central Bank of Nigeria, CBN, has admitted failures in the online payment channels that have 'frustrated banks' customers in the past two months	2023 -03-22	Dissatisfied	Emefiele	9.0379584	7.5339762

Figure 5: A sample image of geolocated locations of dissatisfied citizens over cash and fuel scarcity.

Conclusion and Recommendation

This study has shown the possibility of getting citizens dissatisfaction on social services through media print.

Further research can;
- Make use of social media data like Twitter.
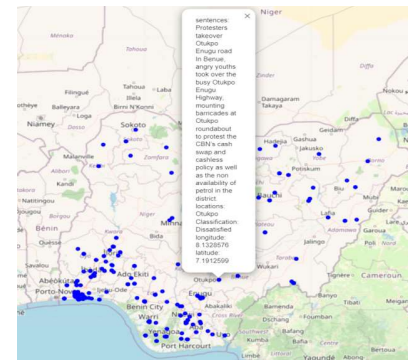- Finetuned model for both Text Classification and Named Entity Recognition.

Figure 6: Map showing geocoded locations where citizens are dissatisfied.

References:

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