

Team Members-

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Attached below are the screenshots of the answers our RAG chatbot gave after asking it the questions mentioned in the Hackathon.

CMPE-274 Business Dashboard

Explore the dynamic interplay of urbanization and agrifood systems transformation across the rural-urban continuum. This dashboard provides insights into global and local food security challenges, innovations in sustainable agriculture, and the impact of economic, environmental, and social factors on nutrition and health. Dive into data-driven analyses and visualizations that highlight the state of food security and the pathways to achieving healthier diets for all.

RAG Chatbot

Plot

Executive Report

Explore the innovative applications of generative AI in the realm of food security. This section explores how AI technologies can forecast agricultural outputs, optimize food distribution, and enhance nutritional planning to mitigate hunger. It discusses the potential of AI to transform food systems through predictive analytics, machine learning models, and real-time data processing, fostering more resilient and efficient food production and supply chains.

Chatbot

List major Food insecurity reason in 2023 (from SOFI)

The major food insecurity reasons in 2023, according to the SOFI report, are:

1. Climate change and extreme weather events
2. Conflict and violence
3. Economic instability and poverty
4. Political instability and corruption
5. Lack of access to education and healthcare
6. Poor infrastructure and transportation
7. Limited availability of clean water and sanitation

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Explain malnutrition in war zones (from SOFI)

Malnutrition is a serious issue in war zones, as it can lead to a range of negative health outcomes. The report "SOFI-2023" highlights that the ongoing crises in the world, including the pandemic and the war in Ukraine, have had a significant impact on malnutrition. The report shows that the number of undernourished people is projected to increase in the coming years, with around 119 million more people expected to be undernourished in 2030 than in the scenario without the pandemic or the war in Ukraine.

The report also discusses the different forms of malnutrition, including low birthweight, which is a major risk factor for infant mortality and long-term health consequences. The latest estimate for low birthweight reveals that 14.7% of newborns (19.8 million) were born with low birthweight in 2020, a non-significant decline from 16.6% (22.1 million) in 2000.

The report emphasizes the importance of optimal breastfeeding practices, including exclusive breastfeeding for the first six months of life, for child survival and the

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Explain increase prices impact on food security (from SOFI)

The increase in food prices can have both positive and negative impacts on food security. On the positive side, higher prices for agricultural products can benefit farmers by providing them with higher income, which can help to boost agricultural income growth and wages. This can lead to improved food security for those who rely on agriculture for their livelihoods. However, the negative impacts of rising food prices can also be felt more strongly in some places than in others. For example, the war in Ukraine and other conflicts, soaring food prices, and extreme weather events can all contribute to food insecurity in certain regions. Additionally, the increase in food prices can lead to higher import costs for countries that are highly dependent on food imports, which can contribute to overall inflation and make it more difficult for people to afford food.

Overall, the impact of rising food prices on food security depends on a variety of factors, including the specific circumstances in different regions and the ability of people and governments to adapt to these changes.

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List major Mosaic Influencers in 2023 based on Mosaic 10-Q

Based on the provided context information and the Mosaic 10-Q, it is not possible to determine the major Mosaic influencers in 2023. The context information provides financial information for the three and nine months ended September 30, 2023, but does not mention any specific individuals or groups that were influential in the company's operations during that time period. Additionally, the context information does not provide any information about the company's operations or management structure that could be used to identify major influencers.

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Compare Food Security issues in Mosaic and Food Security Document (from SOFI and 10-Q)

Food security is a critical issue that affects millions of people around the world. The Mosaic report and the Food Security Document from SOFI and 10-Q provide valuable insights into the current state of food security and the challenges that need to be addressed.

The Mosaic report focuses on the impact of climate change on food security, highlighting the vulnerability of smallholder farmers and the need for sustainable agricultural practices. The report also emphasizes the importance of addressing food waste and improving food distribution systems to ensure that food reaches those who need it most.

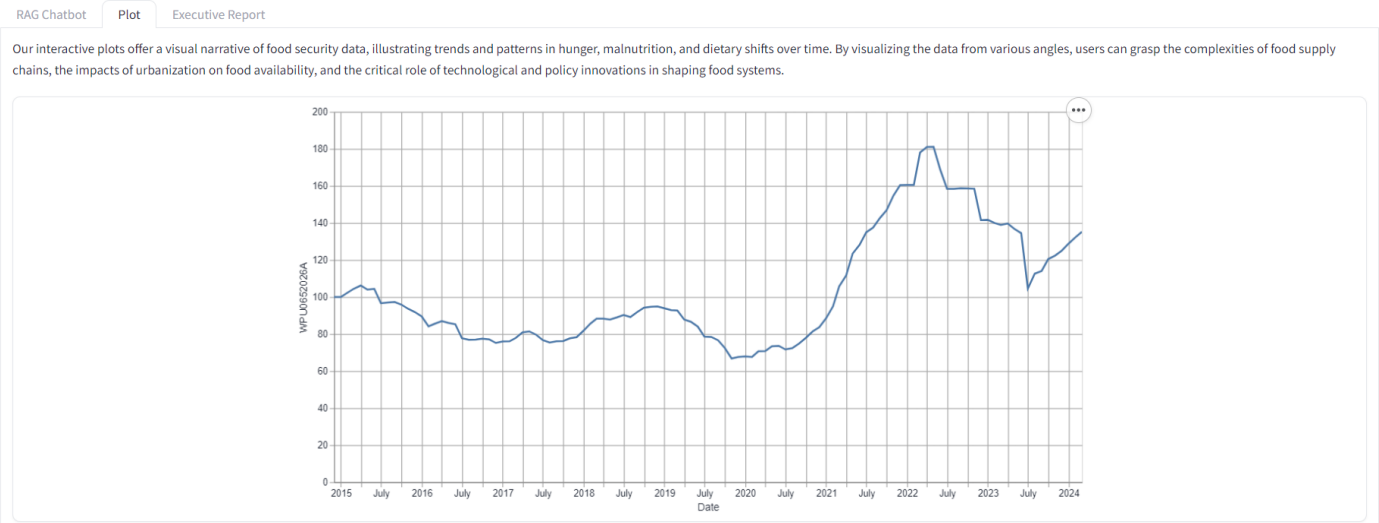
On the other hand, the Food Security Document from SOFI and 10-Q provides a comprehensive overview of the state of food security in the world, including the challenges faced by urban and rural populations. The document highlights the need for sustainable agricultural practices, improved food distribution systems, and increased investment in rural infrastructure to ensure food security across the rural-urban continuum.

Overall, while both reports highlight the importance of addressing food security issues, they differ in their focus and scope. The Mosaic report is more specific in its focus on the impact of climate change on food security, while the Food Security Document from SOFI and 10-Q provides a broader

Attached below is the screenshot of the plot

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RAG ChatbotPlotExecutive Report

Dive into detailed reports that synthesize the latest findings on food security, agrifood systems, and nutritional trends. Each report combines rigorous analysis with policy recommendations, providing stakeholders with the information needed to design interventions that enhance food security and promote equitable access to nutritious diets.

	Mosaic	Food Security
Food Security Measures	One approach to improving food security is through the development of urban food systems. This involves creating a diverse and complementary range of food production, distribution, and consumption systems that are tailored to the needs of urban populations.	Strengthening agricultural productivity and resilience: This involves investing in research and development, improving access to inputs such as seeds and fertilizers, and promoting sustainable agricultural practices.
Climate Change	Overall, the mosaic document suggests that climate change is a complex and multifaceted issue that requires a comprehensive and coordinated response from governments, civil society	The SOFI document discusses the risks of extreme events and disasters in the context of climate change. It highlights the potential impacts of climate change on agriculture, food security, and nutrition. The document also discusses the importance of adapting to these risks and the role of sustainable rural livelihoods in this process.
Wars and Political Uncertainties	The mosaic document discusses contingencies and their impact on various countries, including Georgia, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestine, Qatar, Saudi Arabia, Syria, Turkey, and the United Arab Emirates, as well as political uncertainties in these regions.	The SOFI document provides information on various political uncertainties and conflicts in countries such as Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Türkiye, United Arab Emirates, and Yemen, which may impact the stability and security of the region.