**AI-POWERED HUNGER HEAT MAP WITH BLOCKCHAIN- ENABLED DIGITAL FOOD TOKEN SYSTEM FOR EQUITABLE FOOD ACCESS**

#### ABSTRACT

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**ABSTRACT**

For millions of people around the world, hunger and food insecurity remain major pressing issues. The conventional food distribution systems tend to be inefficient, non- transparent, and lack real-time tracking and monitoring, thereby creating a delay in serving those who most need it. This project proposes a digital platform that unites geospatial mapping, authenticated access, and analytics to assist with efficient hunger relief management. The platform features a secure login and password module for administrators and volunteers to monitor real time food distribution management. After logging in, each user defines their role to broaden their access as an administrator or subject to their volunteer responsibilities. Users view a Hunger Heatmap via Google Maps that shows affected regions with varying levels of severity in colors to identify the most affected areas. To ensure verification and accuracy of region validity from hunger reports, there are verifiers to prevent reported hunger issues from being false or duplicated, and duplicated records from being duplicated. A statistical dashboard is included so users can see the hunger issues, an overview of points of resources distributed, and an overview of progress over time. The platform supports Sustainable Development Goal (SDG) 2 - Zero Hunger and demonstrates how digital innovation can be related to social causes. The solution is scalable, transparent, and adaptable with edges for enhancements such as AI- based prediction, and secure blockchain-enabled tracking as it pertains to small-holder farmers and agricultural producers.