Predicting Food Insecurity In Ghana Using Machine learning

Integrated Food Security Phase Classification **(IPC) data modelling**

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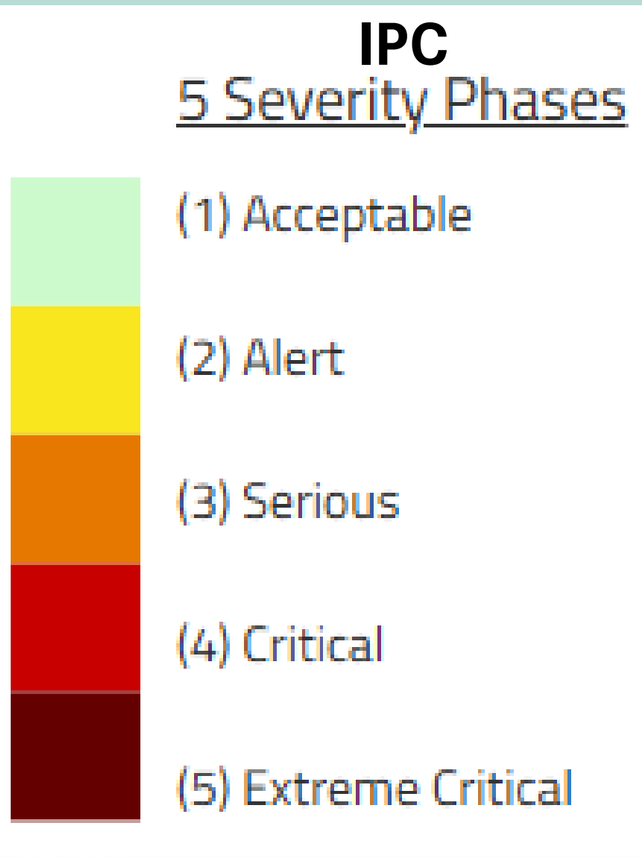
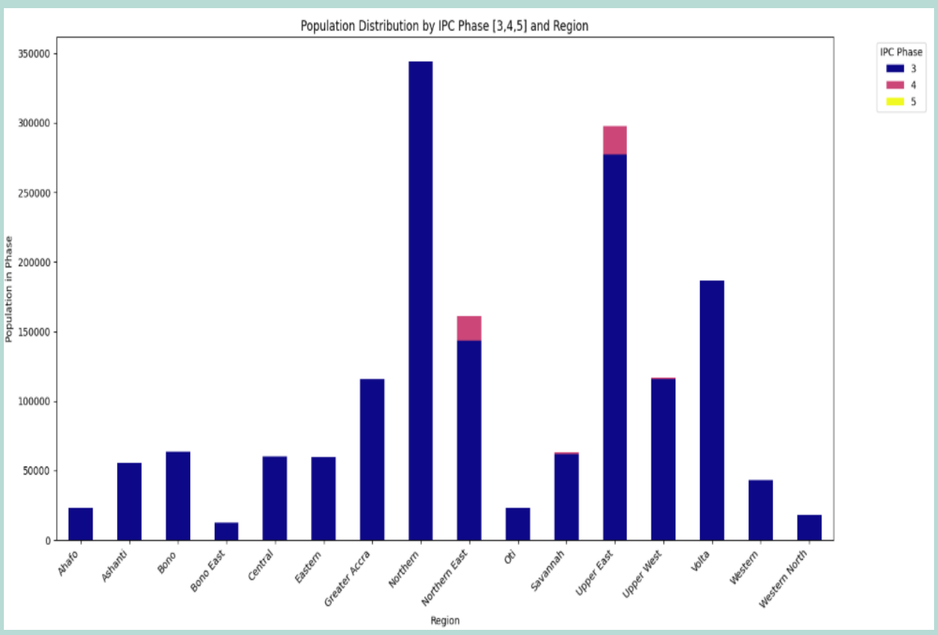
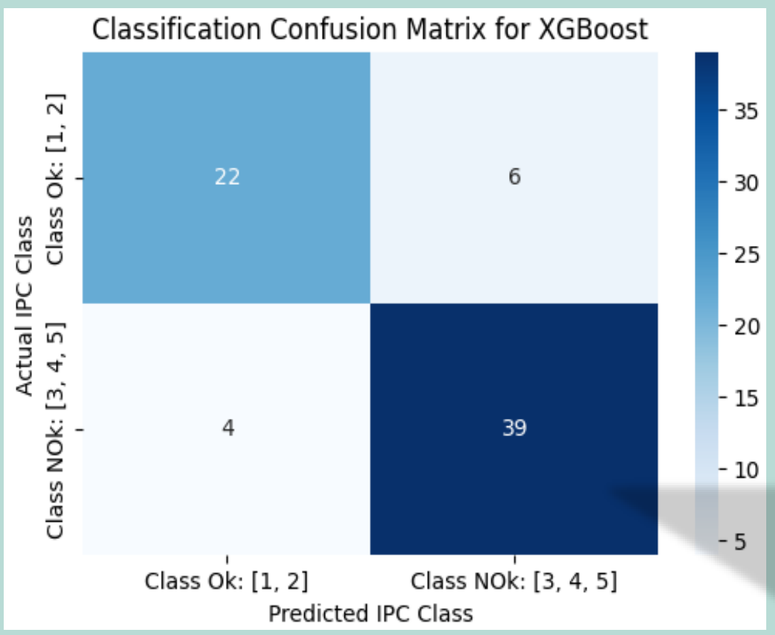
Principles of Data Science

Predict **IPC Class** given [Region, Population]

86% Accuracy







The analysis of food insecurity in Ghana used the IPC dataset, focusing on crisis levels (phases 3-5).

After preprocessing, multiple models were evaluated, with XGBoost achieving an initial accuracy of 0.45.

Reclassifying IPC phases into "acceptable" (1-2) and "requiring urgent attention" (3-5) boosted accuracy to 0.86.

This model empowers policymakers and humanitarian organizations to target interventions effectively by predicting food insecurity with 86% accuracy on critical IPC phases 3,4 and 5.