



15th- 16th
October 2024
Nairobi, Kenya

**Enabling
rural
economies:**



**Creating lasting
impact for the
digital ecosystem
in Africa.**

#ALE2024
#AgriFinALE2024



A Deep Learning Approach to Processing Cricket Songs for Improved Farming as Food

Presentation by:

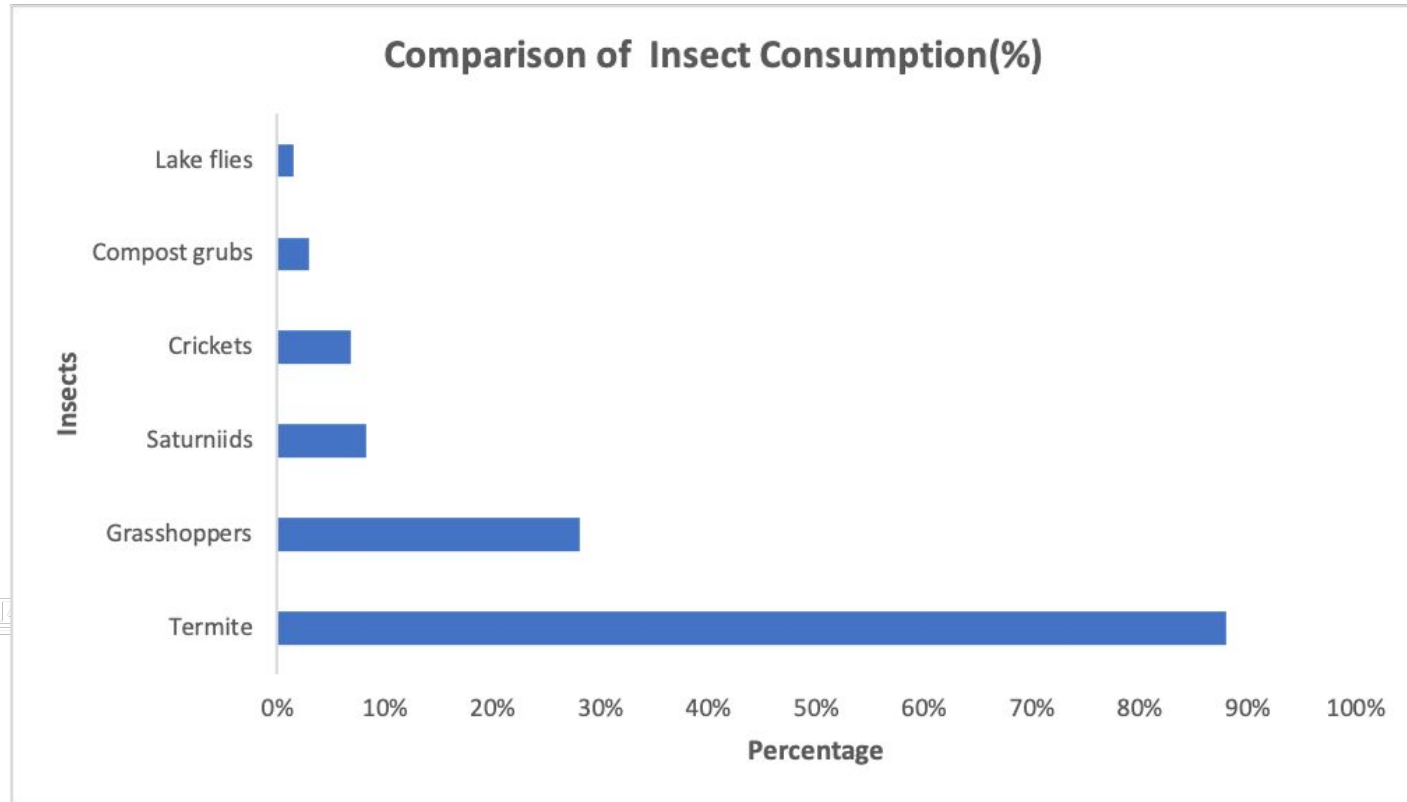
Dr. Kennedy Senagi

Postdoctoral Fellow – Data Management

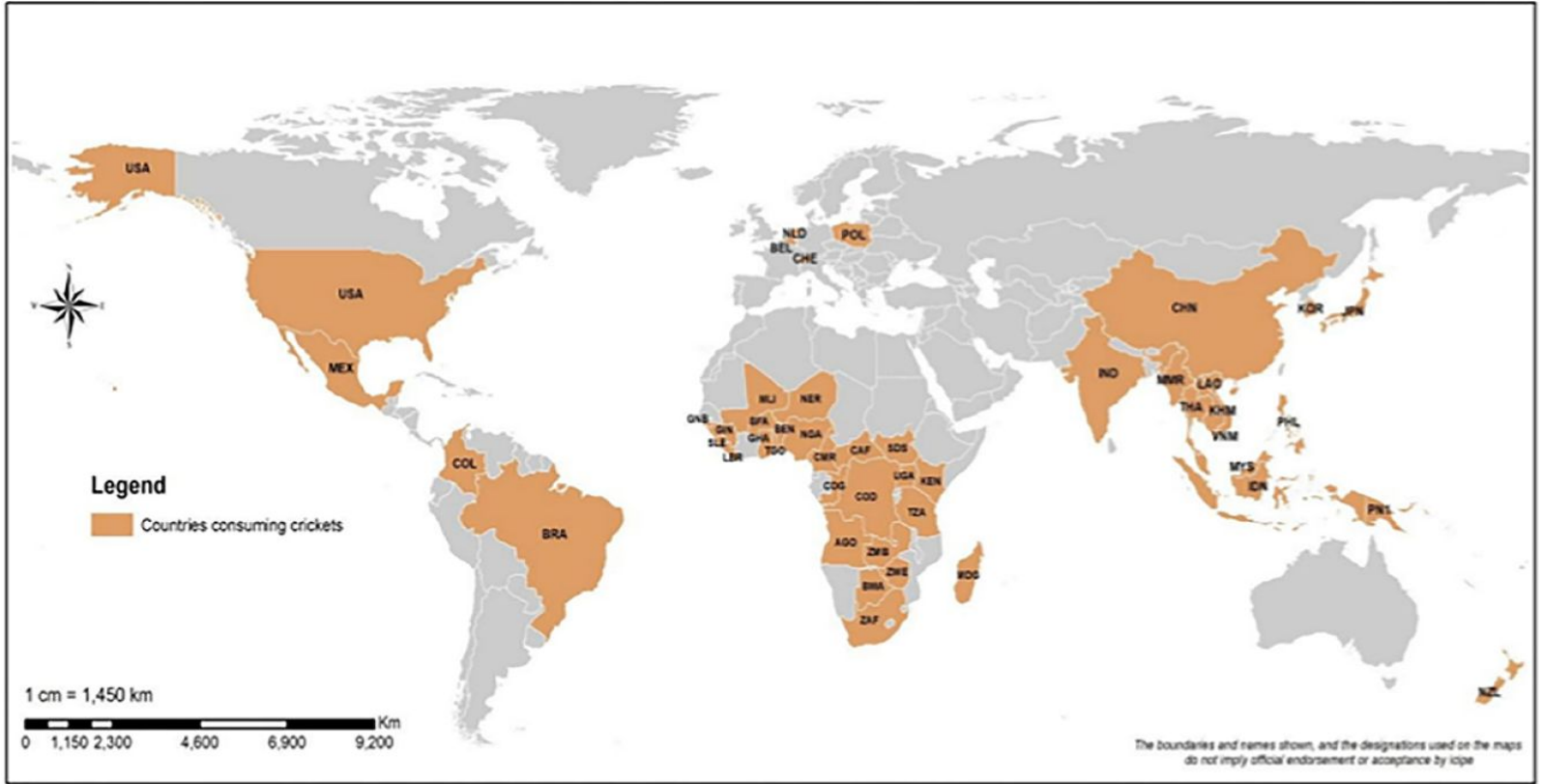
International Centre of Insect Physiology and Ecology (*icipe*)



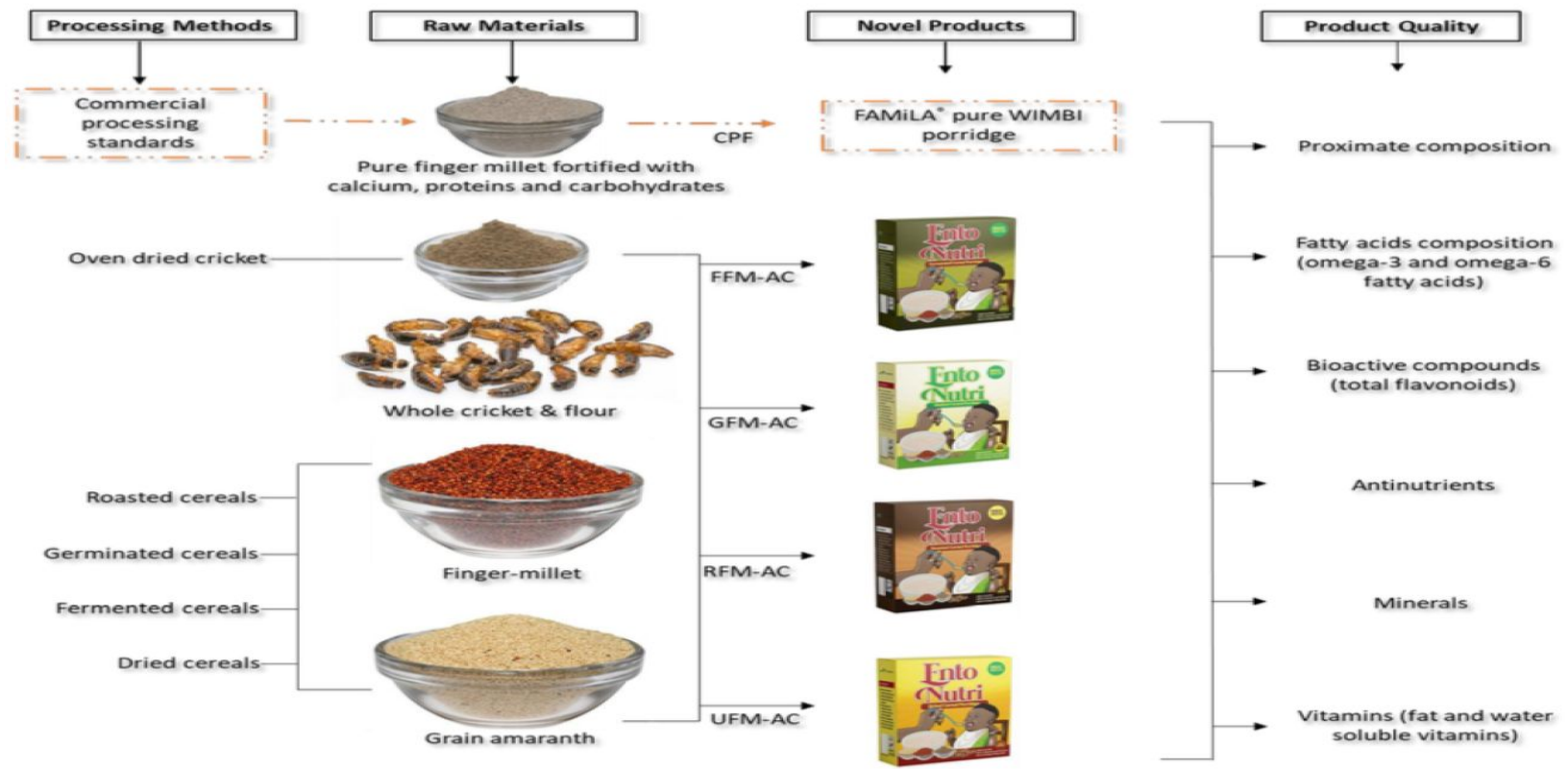
Global Consumption of Crickets - Proteins



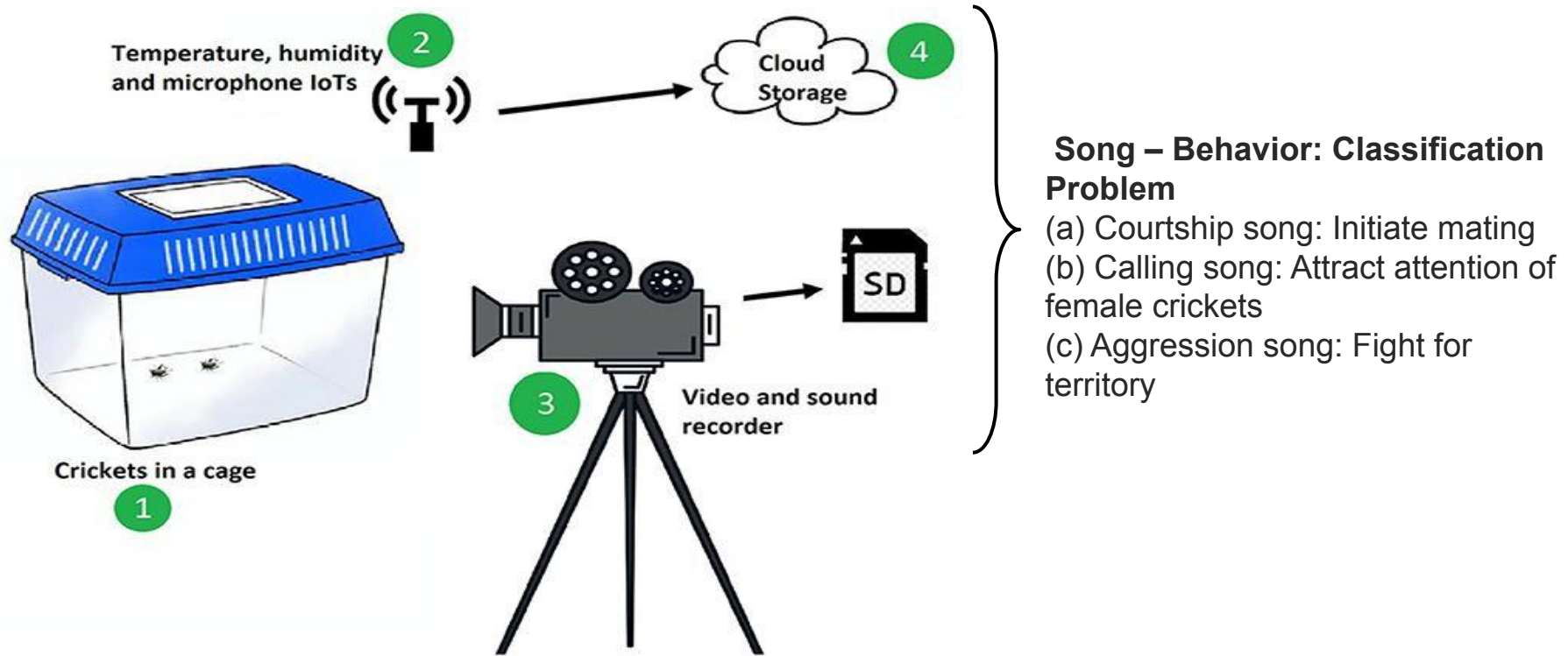
Global Consumption of Crickets



Value Addition: Crickets as Food 4 Humans

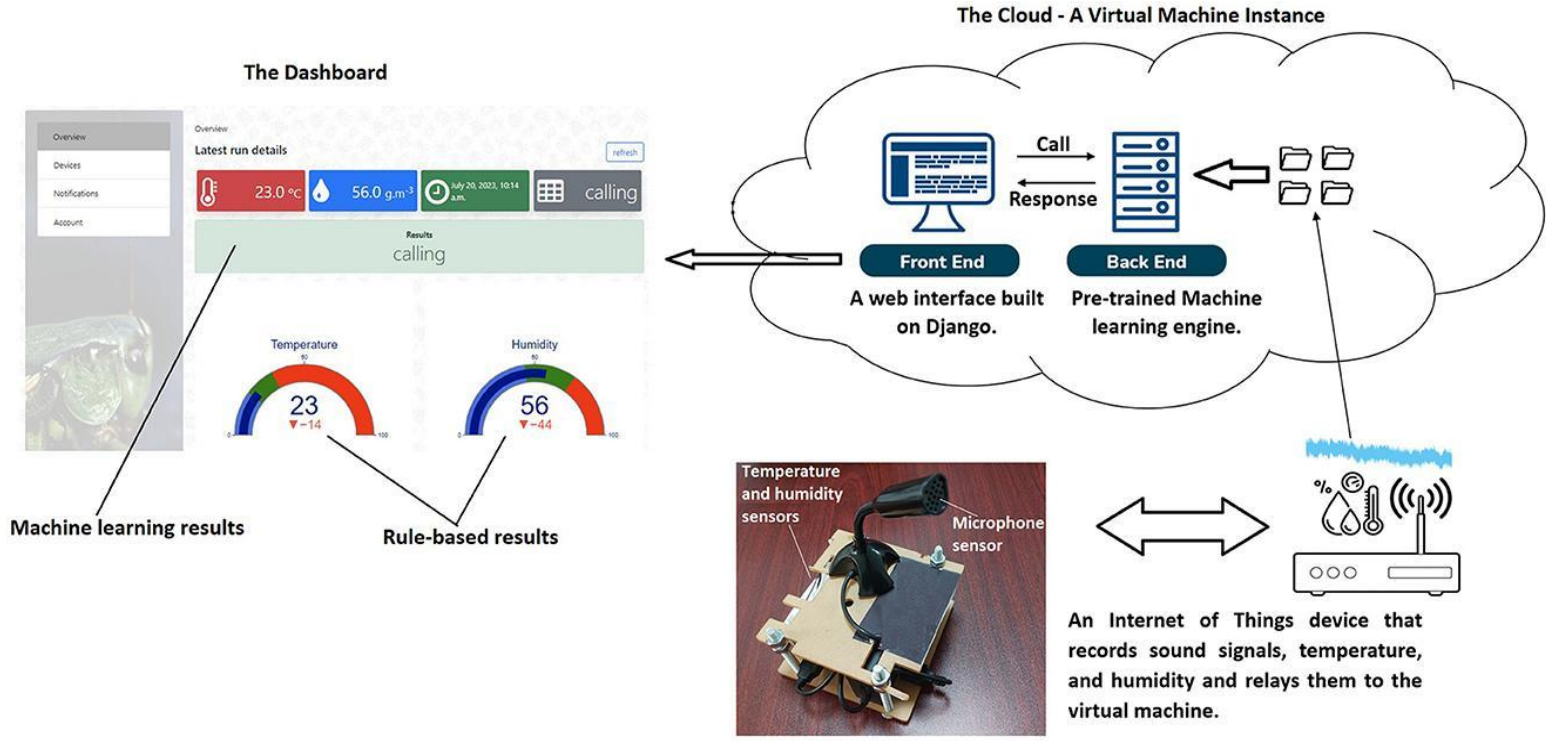


Experiment Setup: Study Cricket



This illustration depicts the experimental setup used to study cricket behavior and song production under varying

The Decision Support System.



After every 5 min, the IoT device captures and transmits 3-second .wav files, temperature, and humidity data to the virtual private network through a built-in WIFI module. Thereafter, after every 5 min, the system's back end fetches the latest records (.wav files, temperature, and humidity), preprocess them, and passes that to the pre-trained machine learning engine for prediction and the results are rendered on the front end dashboard



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Thank you for
your
attention.

