Team 0

“Microbiome Data Bank”

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Motivation

- Can unsupervised machine learning detect geographic similarities in microbiome data?
- Historically, human bias has impacted how human biological variation is classified. Can machine learning detect meaningful patterns of variation without including human bias?
- Can a large-scale data bank of microbiome data be established for global usage and assist in answering geographic related research questions?

Execution

- Web App (Django)
- Regional Microbiome Data (16S)
- Unsupervised Machine Learning (k-means/PAM)

Outcomes

- Users can contribute Microbiome data to the MDB
- Users can download the pipeline for local usage
- Users can select regions for cluster comparison
- Intuitive design for non-technical users