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ARTIFICIAL INTELLIGENCE

Advancing the Discipline of Weather-Informed Malaria Prediction and Planning Utilizing Big Data & AI

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PROJECT SCOPE

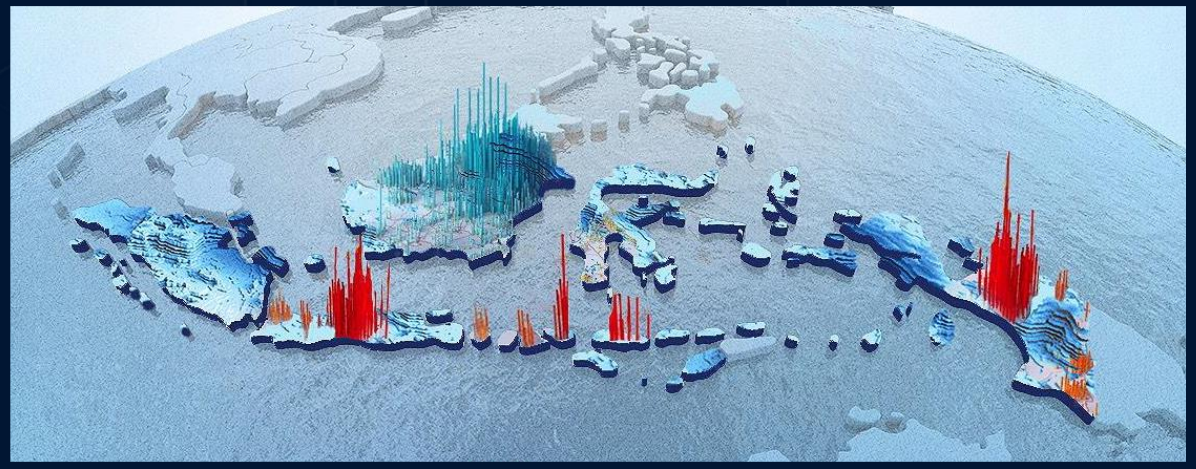
AI-based tools will be developed to monitor weather and climate over Indonesia from space in a near-real-time. Geostationary satellite images over the region will be collected at a spatial resolution of 2 km and temporal resolution of 10 minutes. This will give an accurate near real-time monitoring of weather patterns over two main endemic areas: Central Papua and Lampung.

Artificial intelligence techniques and clustering analysis tools will be applied to the collected dataset to identify recurrent features contributing to Malaria outbreaks.

PROJECT OBJECTIVES:

As part of our engagement with **Malaria No More**, **MBZUAI** and **KORIKA** will lead the development of the following tools and models for Indonesia:

- **Risk model** combining computer vision and supervised learning for climate-based risk stratification
- **Advanced computer vision and image processing techniques** to improve the detection of malaria parasites and identify their types
- AI-pow**ered models** to process weather and human movement data to improve the prediction and forecasting of Malaria outbreaks



KEY OUTCOMES:

- Setting-up a virtual center of excellence to advance the discipline of weather-informed malaria prediction. **MBZUAI** and **KORIKA** will serve as the Artificial Intelligence (AI) Hub for the **Forecasting Healthy Futures** initiative.
- Implementation of a live feed with real-time satellite data and output of atmospheric model over Indonesia. The developed tool will be showcased during **COP28** and other relevant events.

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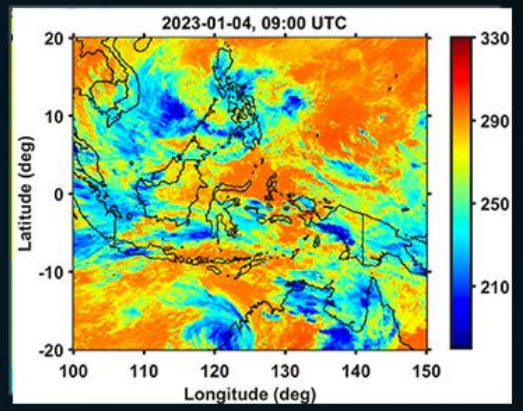
GLOBAL DATA MEASUREMENT



VISUALIZE DATA

231.702 ▲ 10%

Bei jing	875	202
Shang hai	601	497
Lan jing	673	910
Jiang shu	229	516
Si chuang	707	726

KEY DATA

231.702.08

RISK STATISTICS

231.702.08

REAL-TIME MONITORING

231.702.08 ▲ 10%

Real-time data 01	58%
Real-time data 02	46%
Real-time data 03	79%

KEY DATA

231.702.08

RISK STATISTICS

231.702.08

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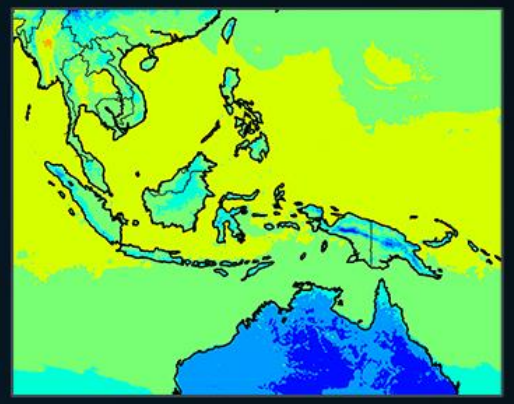
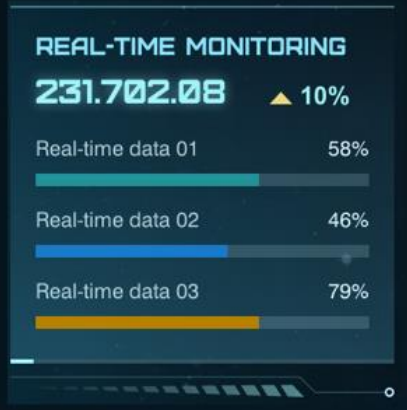
GLOBAL DATA MEASUREMENT





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GLOBAL DATA MEASUREMENT

HUMIDITY

63%

KEY DATA
231.702.08

RISK STATISTICS
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VISUALIZE DATA
231.702 ▲ 10%

Bei jing	875	202
Shang hai	601	497
Lan jing	673	910
Jiang shu	229	516
Si chuang	707	726

Weekly Trend

36%
Data growth

REAL-TIME MONITORING
231.702.08 ▲ 10%

Real-time data 01	58%
Real-time data 02	46%
Real-time data 03	79%

KEY DATA
231.702.08

RISK STATISTICS
231.702.08

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THANKS !

Do you have any questions?

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