AI Driven Innovations in Developing Economies

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Yuxi Circle

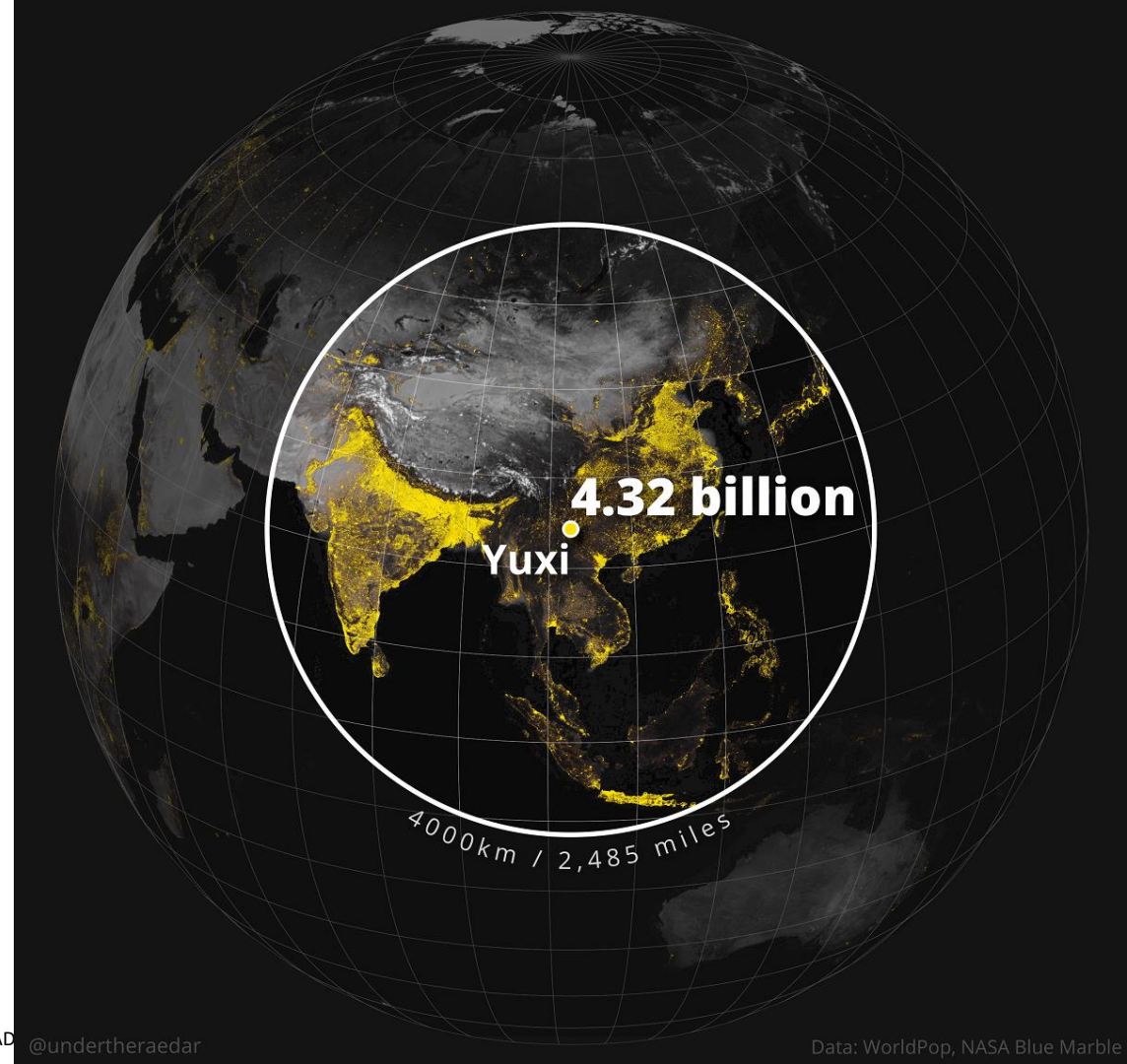
55% population
~10% surface

> 50% MSMEs

~45% coastline

5 / global top 10
Global Climate Risk Index

0 Dev. Economy with AI Governance



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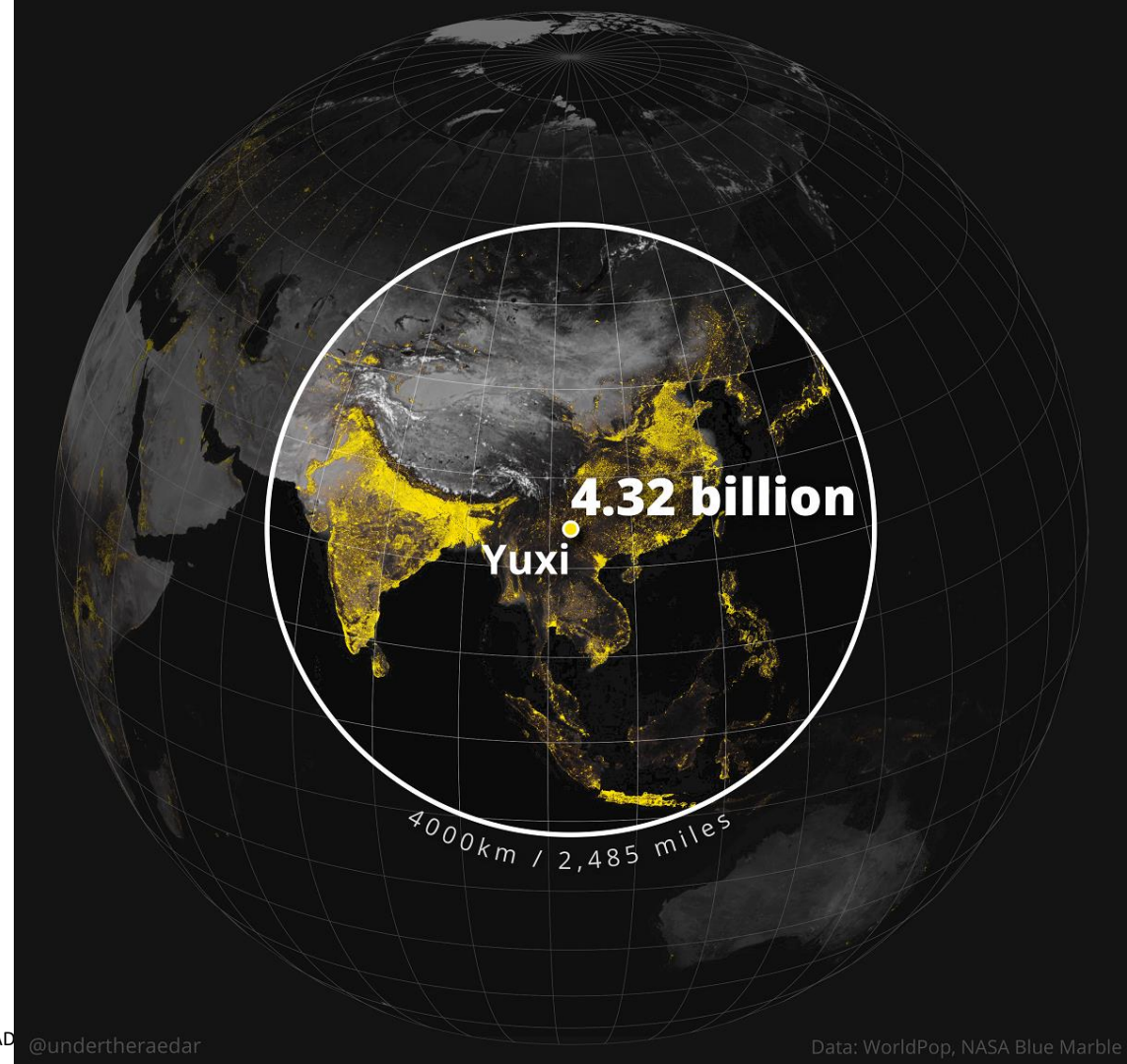

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Satellite Image Analytics for Disaster Management

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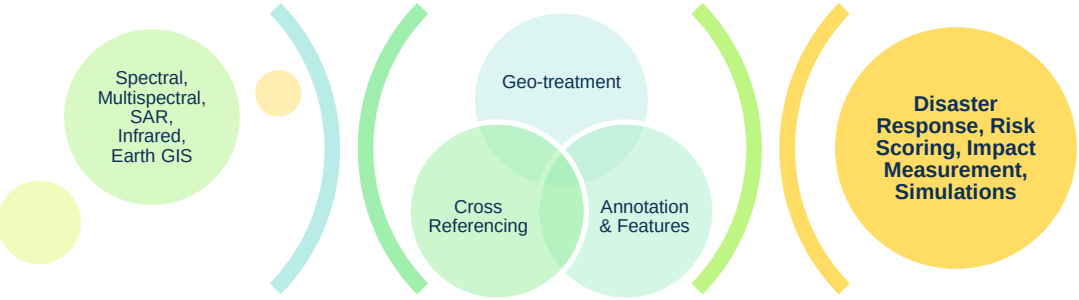
Centralizing knowledge for *Application & Collaboration*

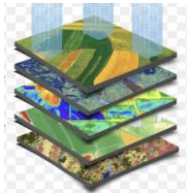
Lay a common ground were all research and applications efforts can be referenced and accelerate their application.

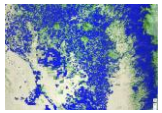


Satellite Images Collection

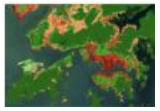
Super-Resolution & Treatment

Case Studies

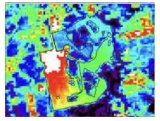




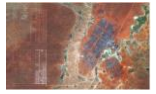
Water Ecology — Floods & Landslide



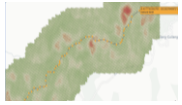
Crop Yield — Drought & Fires



Air Quality — Emission Leak



Citizen Protection — Climate Refugees



Infra Protection — Disaster Response

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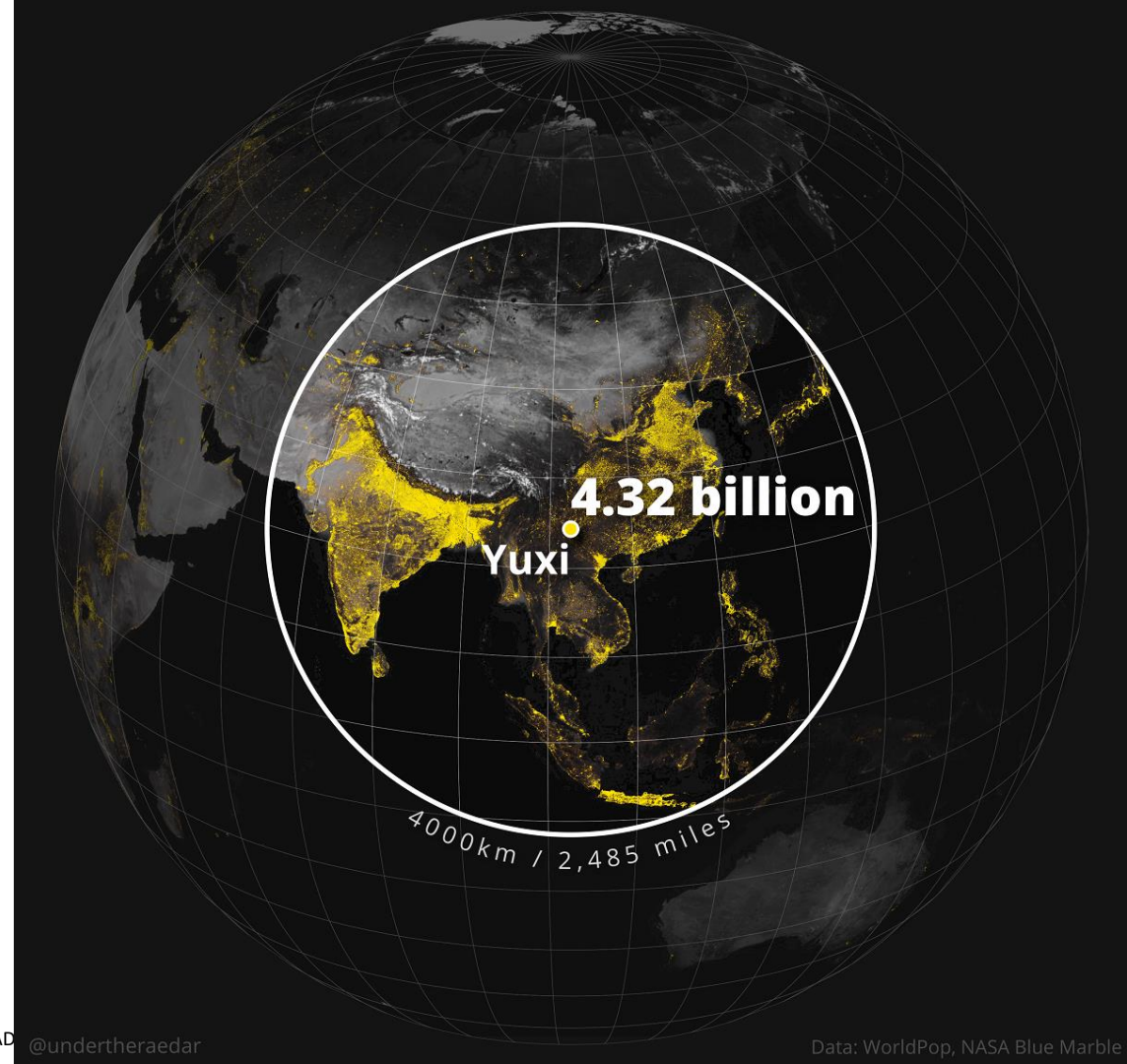

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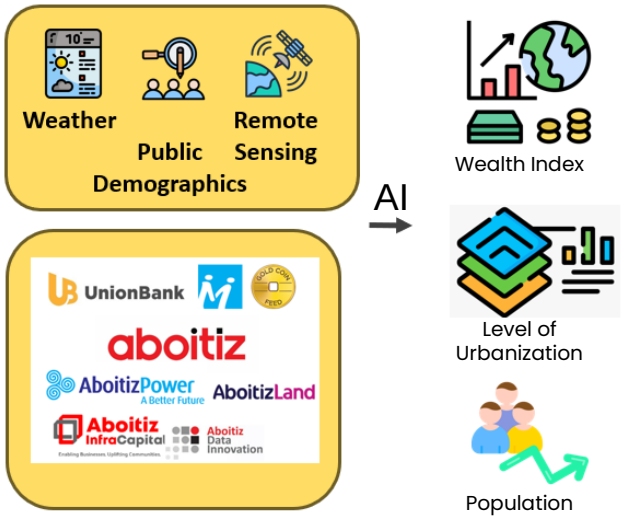
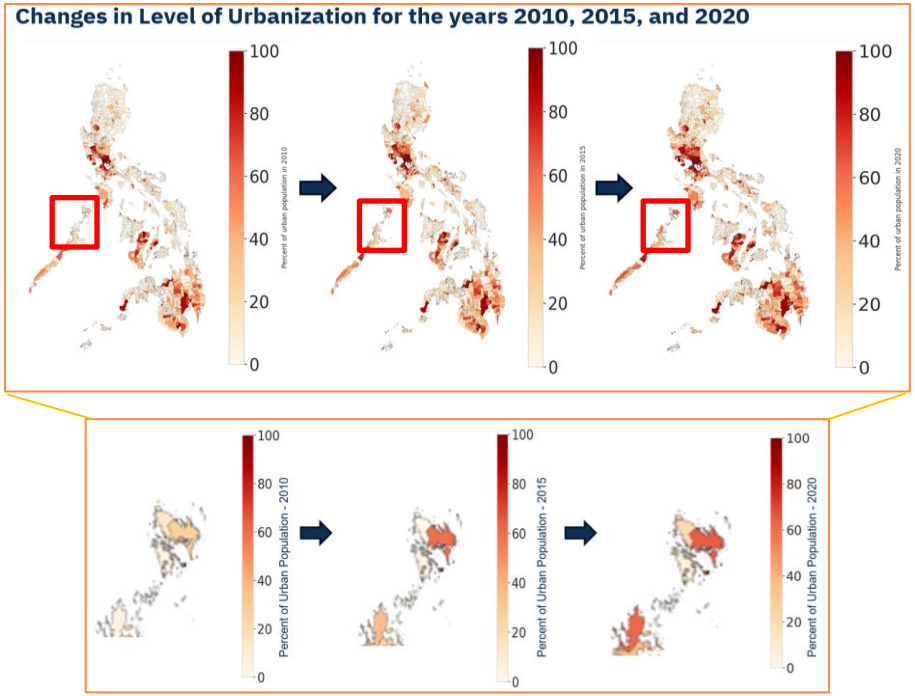
Socioeconomic Forecasting to Empower MSMEs and Increase Financial Inclusion





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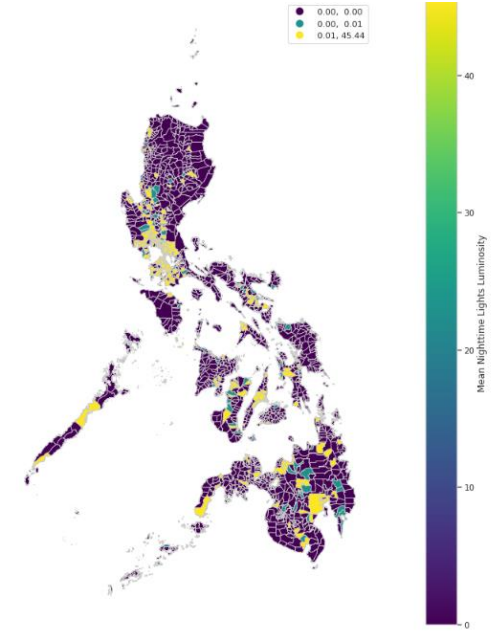
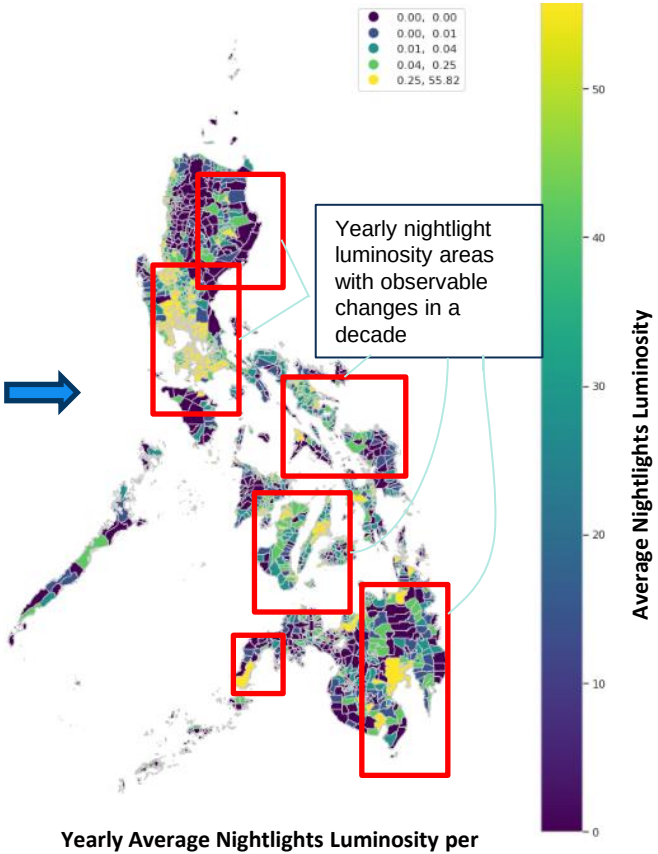
Nighttime Lights as Good Predictor of Economic Growth



Yearly Average Nightlights Luminosity per City/Municipality (2011)

Average Nightlights Luminosity



Yearly Average Nightlights Luminosity per City/Municipality (2020)

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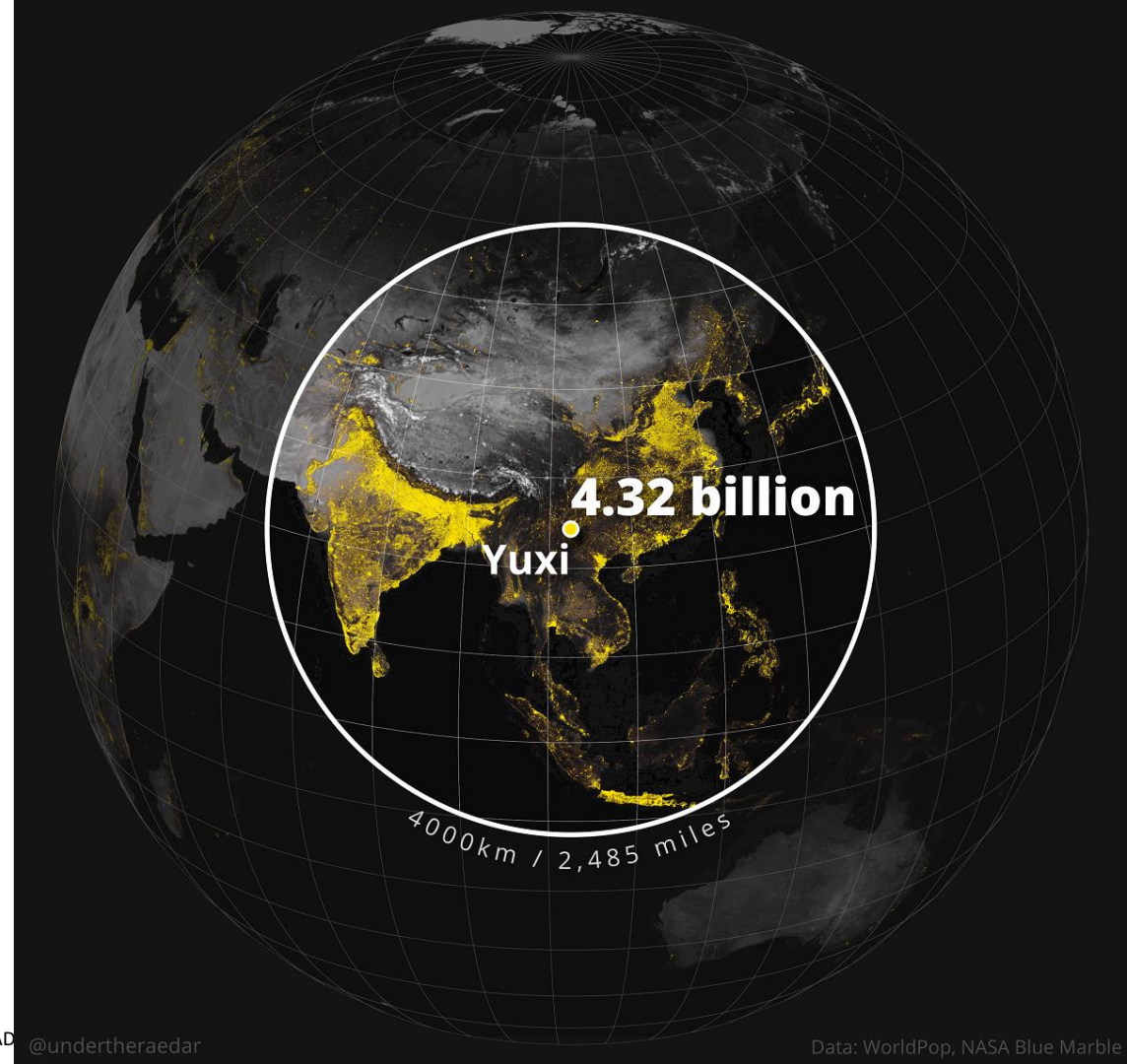

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Sustainable Blue Economies

- Whitepaper July 2024
- Need for integrated approaches to effectively manage and utilize marine resources
- 10 key blue economy sectors
- Energy, AI, Marine Spatial Planning

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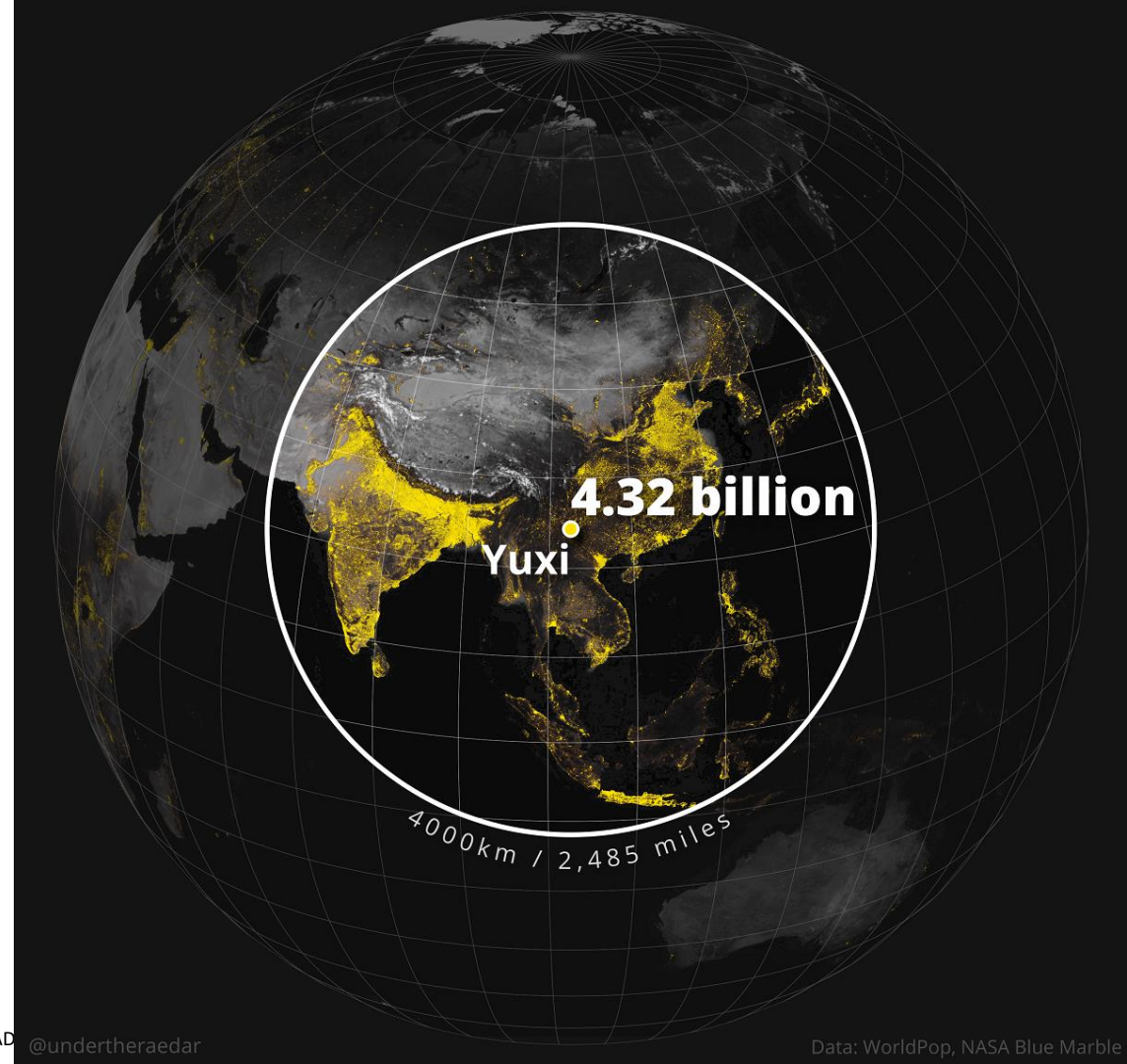

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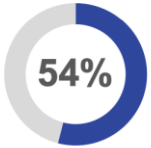
XRAI: Explainable and Responsible AI

Feelings about AI

% agree (31 country-average)



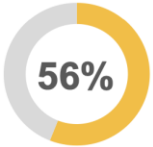
Products and services using artificial intelligence have more benefits than drawbacks

Products and services using artificial intelligence make me excited

Products and services using artificial intelligence make me nervous

Trust in AI

% agree (31 country-average)



I trust artificial intelligence to not discriminate or show bias towards any group of people

I trust companies that use artificial intelligence as much as I trust other companies

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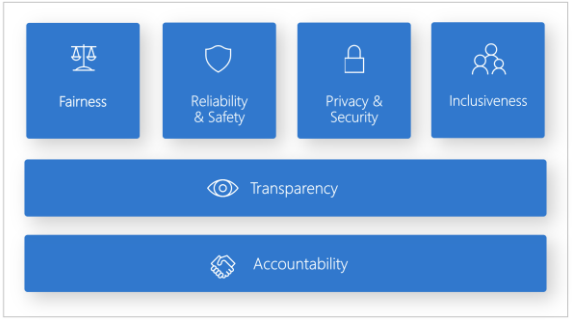
XRAI: Explainable and Responsible AI

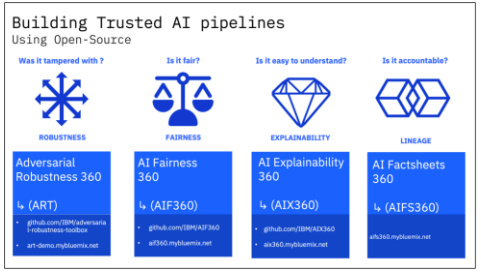
MAS' FEAT principles --> made for financial institutions



Microsoft's Responsible AI Framework and Toolbox --> Error, Fairness, Interpretability

Artificial Intelligence Risk Management Framework (AI RMF 1.0)

NIST AI Risk Management Framework --> general framework



IBM Open Projects --> Fairness 360, Privacy, Explainability, Adversarial Robustness 360

The Explainable and Responsible AI (XRAI) Guidelines and Toolkit integrates principles and practices from different frameworks to elevate DSAI model effectiveness across the Aboitiz ecosystem

IMDA's AI Verify Toolkit --> focused on governance

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Poll

Where can AI deliver most impact and value for developing economies?
(Multiple answers possible)

A) Disaster Risk Management
B) Socioeconomic Forecasting
C) Sustainable Blue Economy
D) Development of Explainable and Responsible AI

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