

AI AND THE ENVIRONMENT

Focus question:

Is AI aiding us in overcoming the climate crisis, or is it contributing to the problem?

The Hopeful Argument

- **Smart agriculture**
- **Clean Energy Forecasting**
- **Logistic Optimisation**
- **Biodiversity Monitoring**

**..... and Saving the
World?**

Smart Agriculture

- Water irrigation adapt to draughts
- Water directed to where it is needed
- Waste reduction protected crops, and ecosystem

Clean Energy Forecasting

- Wind and solar farms predict energy output
- More accuracy = more reliable on the grid
- Cuts down on fossil fuel dependence

Logistic Optimisation

- Amazon's Relay app streamlines trucks at warehouses
- Less idling = less fuel consumed
- More efficient transport networks

Biodiversity Monitoring

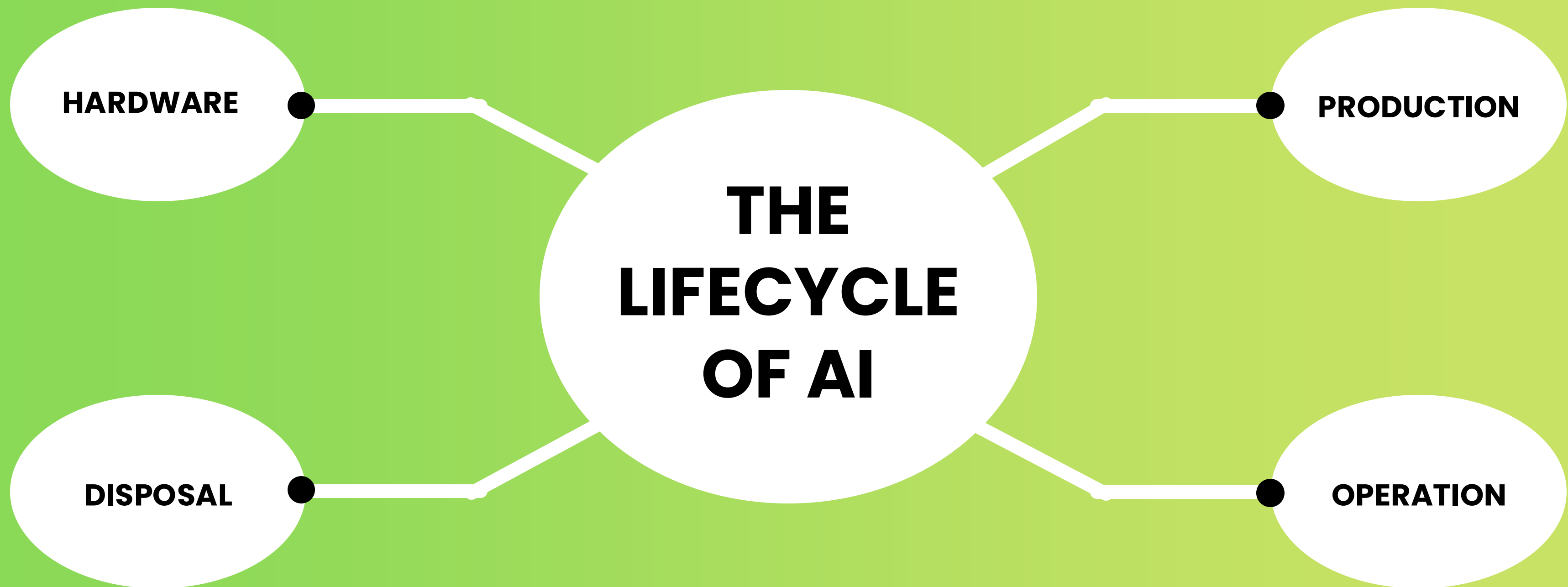
- Tools like WildMon track endangered species
- Detects poaching, habit loss, and deforestation
- Data to supports conservation efforts

Saving the World?

Use as much AI as possible and AI might help solve big problems:

- fusion
- carbon capture
- new climate technologies.

Costs are justified by the chance of a breakthrough.



Hardware

- Cobalt, Lithium, and Copper
- DRC and Chile
- Child labour, ecosystem collapse, water depletion
- Non renewable

Production

- Chips, Servers, and Devices
- China, Taiwan, Vietnam
- Large energy footprint, powered by coal and gas

Operation

- Training a single model used 550,000lbs of Co2 .
- Millions of litres of water for cooling
- Built near cheap land and water

Disposal

- Server racks, cooling units, and outdated chips
- Millions of tonnes of toxic e-waste each year
- Landfills in Global South leach into soil

Common Misconceptions

Rebound

In time it will be more efficient

More efficient = more use

24x more efficient, but 200x the use.

Lock in

We can stop if it becomes too harmful

Once in the infrastructure, its nearly impossible to go back

Who Suffers?

Poor Communities

Workers

Plants and Animals

The Global South

Future Generations

Who Benefits?

Data Rich Nations

Tech Companies

This is not sustainable
AI. This is AI built on
sacrifice zones...

Breakout Questions

- Where do you see the most hidden environmental costs in your own use of AI?
- If a system reduced carbon emissions, but harmed water systems or biodiversity, would it be sustainable? How do we decide which environmental harms matter most?
- What would fairness or justice look like in our current global imbalance?
- Which applications of AI are worth the environmental cost? What principles guide this judgement?
- Imagine a “sustainable AI future”. What would need to change in how AI is designed, governed, or used to make that vision credible?

Further Resources



Anatomy of an AI System
<https://anatomyof.ai/>



Save the AI
<https://savethe.ai/>



Not just a load of Hot Air – by Me

THANK YOU