



Module 3

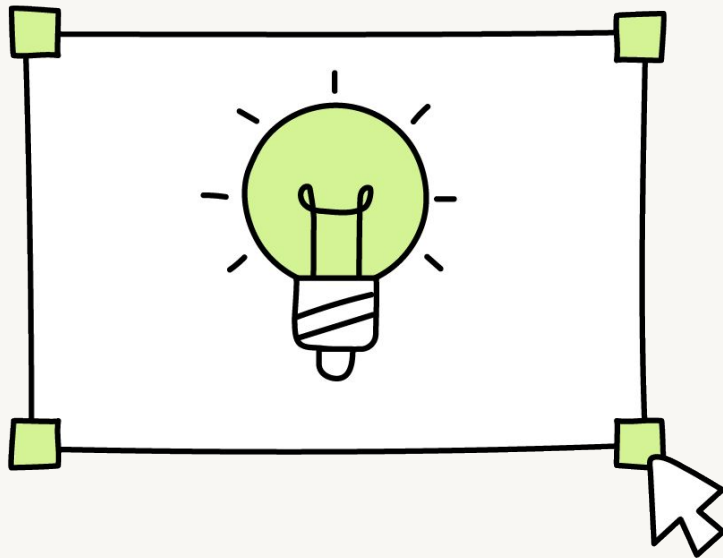
Workshop 2: Ethical and Sustainable Practices in Cloud Platforms



Sustainability snap judgment

In one word or phrase, what comes to mind when you think of sustainability in AI and cloud computing?

Share your response in the chat!





Module 3

Workshop 2: Ethical and Sustainable Practices in Cloud Platforms



Agenda

- **Review:** Recap key concepts.
- **Hands-on analysis:** Sustainability in cloud platforms.
- **Closing:** Wrap up and reflection.



Learning objectives

- Understand the role of data centers in the AI supply chain and why they are critical to sustainability.
- Compare the sustainability practices and commitments of the three major cloud providers (GCP, Azure, AWS).
- Evaluate environmental trade-offs, identifying risks and opportunities for greener AI initiatives.
- Formulate strategies or criteria to choose cloud providers with strong sustainability measures.

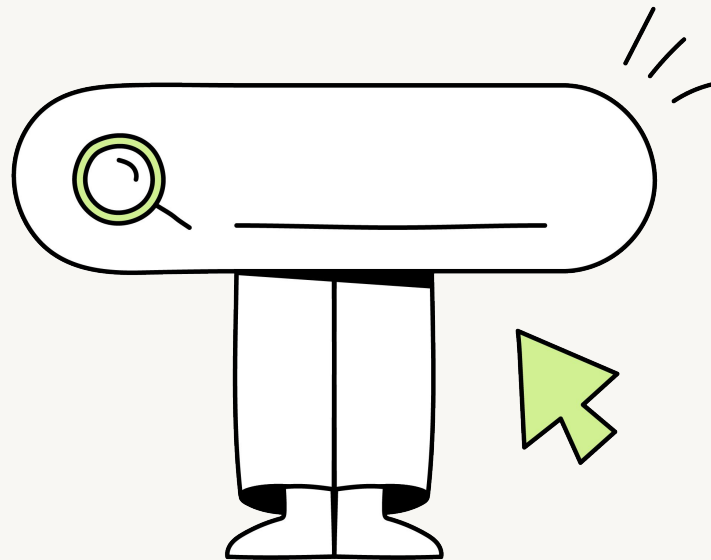


Async review: Unit 2

Ethical data management and cloud sustainability

How can responsible data management in AI and ML models help reduce the environmental impact of cloud computing?

Share in the chat one way ethical data practices can support sustainability.





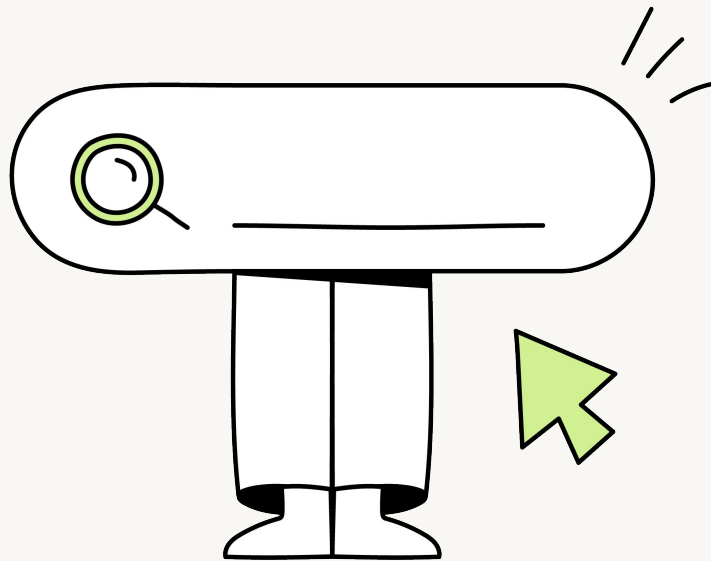
Async review: Unit 3

Strategies for reducing cloud computing emissions

Which strategies help cloud providers reduce emissions while supporting sustainable AI and ML projects?

- A) Renewable energy
- B) Energy-efficient hardware
- C) Carbon offsets
- D) All of the above

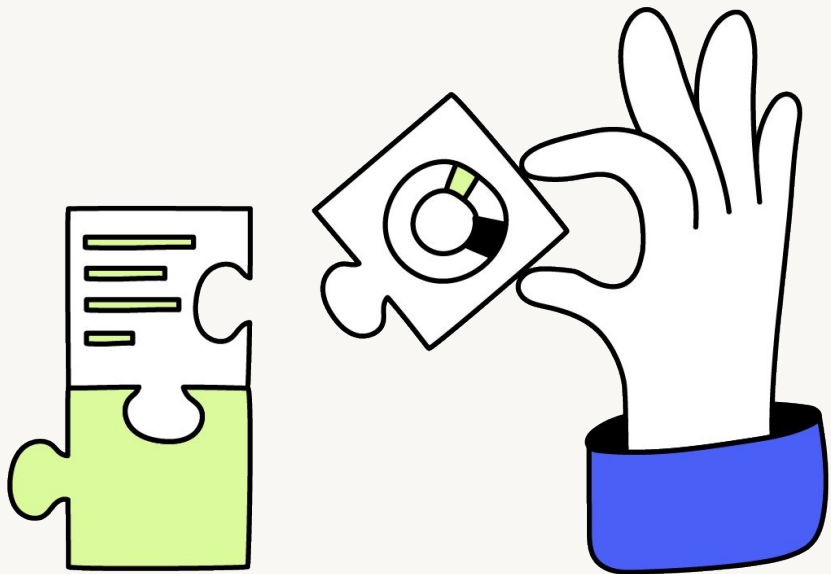
Drop your answer in the chat!





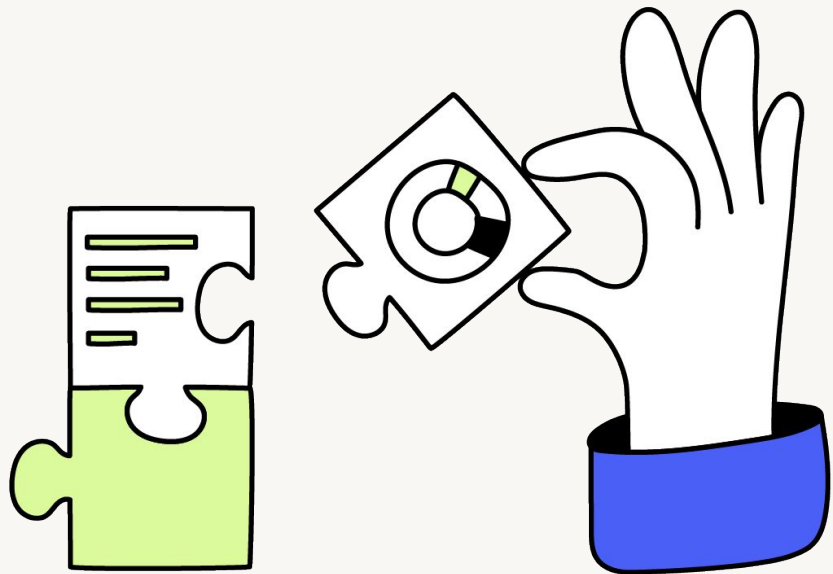
AI carbon footprint

- AI and ML require vast computational power, consuming significantly more energy than traditional computing.
- Training GPT-3 produced 552 tons of CO₂, the same as driving 1.2 million miles in a gasoline-powered car.
- AI energy consumption is growing: By 2030, data centers could consume up to 8% of global electricity.



Breaking down AI energy consumption

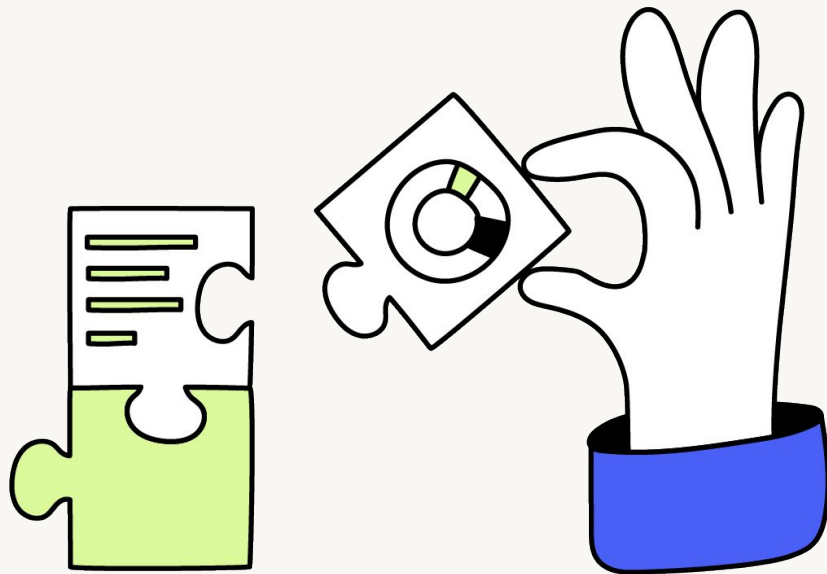
- **Data centers power:** For servers, storage systems, and networking.
- **Cooling systems:** AI servers generate immense heat, requiring continuous cooling.
- **Redundancy and backup power:** To prevent outages, increasing energy consumption.





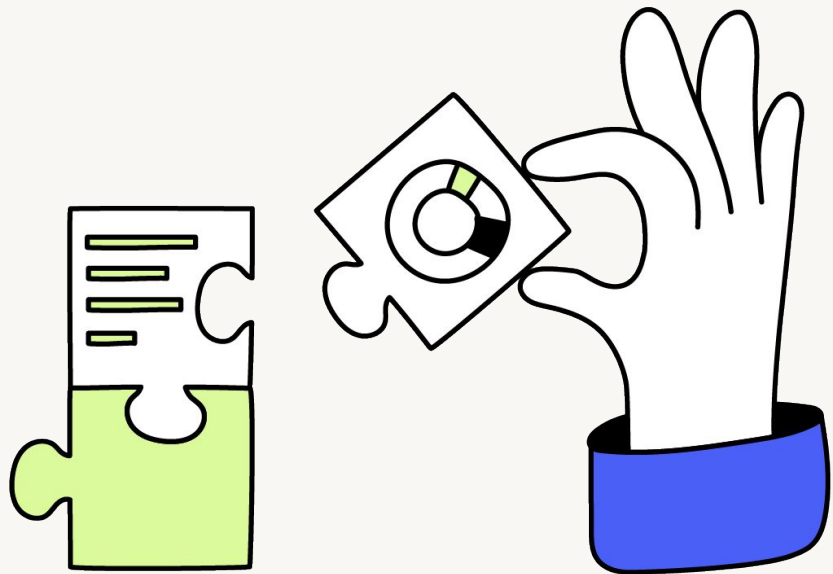
AI for sustainability

- AI is not just part of the problem—it's also part of the solution.
- Companies are using AI to improve energy efficiency, optimize resources, and reduce emissions.



Real-world AI sustainability initiatives

- **Google AI:** Machine learning optimizes data center cooling.
- **Microsoft Azure:** AI monitors liquid immersion cooling, cutting energy waste in servers.
- **AWS:** Graviton processors with AI-driven chip design to improve performance and reduce energy consumption.



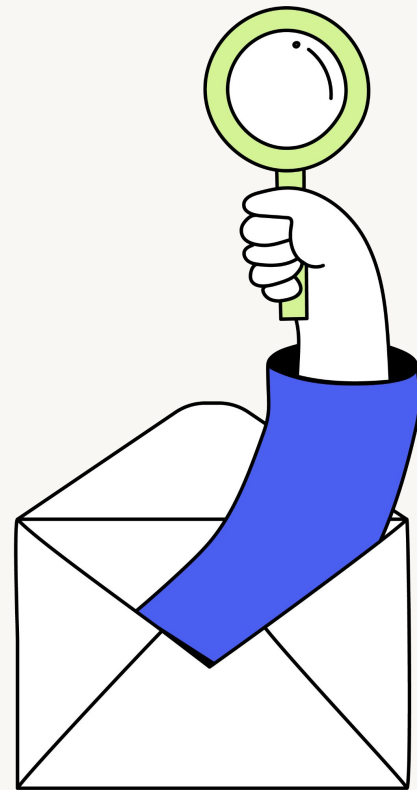


Hands-on analysis: Sustainability in cloud platforms



Activity instructions

- Apply what you've learned in a hands-on challenge.
- Work in breakout rooms in small groups.
- Use the provided worksheet template to compare cloud providers.
- Each group will compare the sustainability practices of GCP, Azure, and AWS.
- Find all instructions and resources on My Multiverse.





Access the skills application

Go to My Multiverse, Module 3
Workshop 2



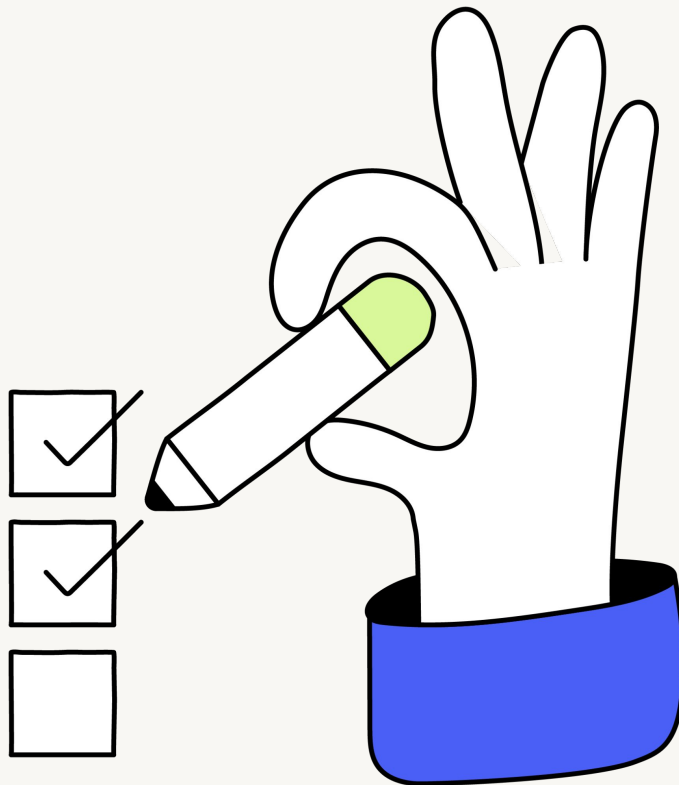
Navigate to the **"Hands-on analysis"**
page



Start working on the activity tasks



Be prepared to share in 20 minutes
when we come back together





Group discussion debrief



Hands-on analysis debrief

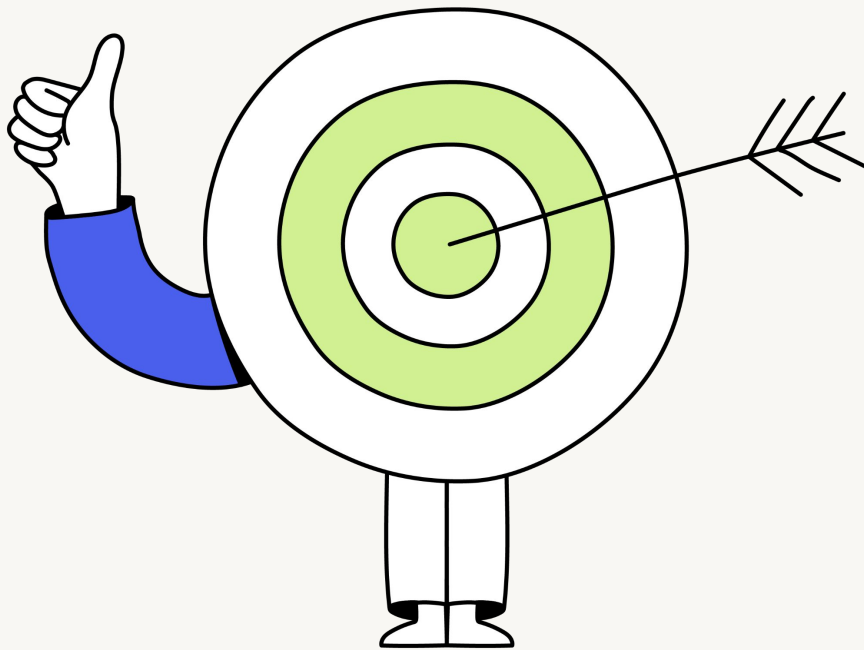
- 1 Which provider demonstrated the strongest sustainability commitments?
- 2 What gaps or challenges did you identify?
- 3 What advice would you give to an organization selecting a cloud provider for AI deployment based on sustainability?





Key takeaways

- 1 Sustainability is an ethical responsibility in cloud-based AI.
- 2 Balancing performance, cost, and environmental impact is essential.
- 3 Transparency and accountability matter, avoid greenwashing.
- 4 Real carbon reduction efforts should outweigh reliance on offsets.
- 5 Responsible cloud choices drive long-term AI sustainability.





Applying **key** **takeaways** to your organization



Applying key takeaways

- 1 Does your organization consider sustainability and ethical AI when choosing cloud providers? If not, how could it be integrated?
- 2 How can your company hold cloud providers accountable for their sustainability claims?



Share your plan to apply new skills

Go to My Multiverse, Module 3
Workshop 2



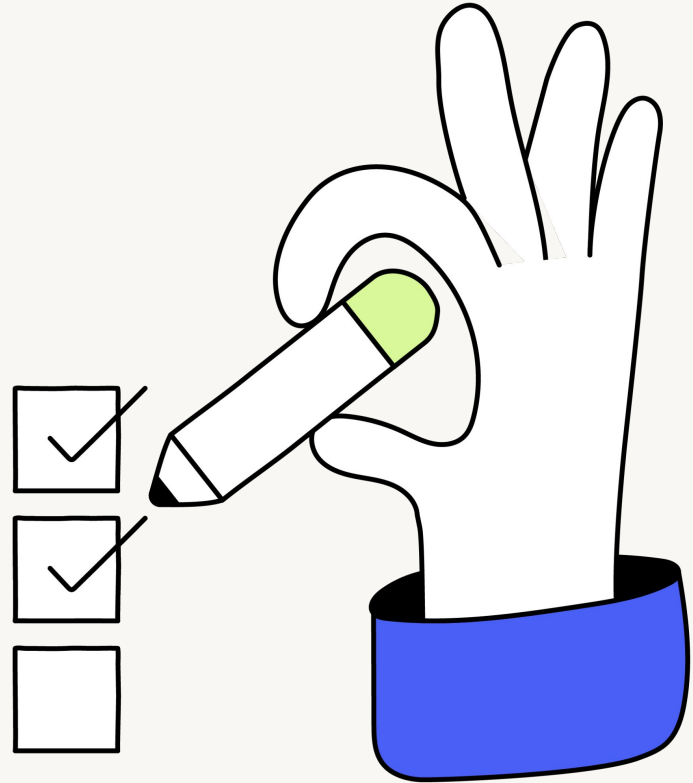
Navigate to the discussion activity
page **"Apply new skills to your role"**



Take 5 minutes to share how you will
apply this skill in your role



Take time this week to read what
others have written and get new ideas!





Closing out

- **Next workshop:** Module Wrap-Up Workshop
- **Have questions?**
 - Chat with Atlas
 - Reach out to your Cohort Coach
 - Sign up for Tutoring
- **Log your OTJ hours**
- **Take the Workshop Survey** on My Multiverse

multiverse