Explain compute governance to a friend

Starter · 1–3 hours · Free · Step-by-step guide

Online version: https://ai-safety-sandbox.vercel.app/projects/explain-compute-governance/

Summary

Why do so many governance proposals focus on chips? Read one key paper and write a jargon-free explainer for someone outside tech.

Why it matters

Compute governance underpins export controls, thresholds and verification proposals. Explaining it well is how ideas spread to decision-makers.

What you will have at the end

An 800-word explainer.

Steps (tick each box as you go)

- [ ] **1. Read the key paper's summary (45 min)**
  Read the introduction and summary of "Computing Power and the Governance of Artificial Intelligence". Note the three or four properties that make compute governable.
- [ ] **2. Find an everyday comparison (15 min)**
  Think of something similar people already understand (regulating dangerous materials, for example) and where the comparison breaks.
- [ ] **3. Draft it (45 min)**
  Explain what compute is, why it is trackable, what governments do with that, and one big open question.
- [ ] **4. Test on a reader (15 min)**
  Ask a friend to explain it back to you. Fix whatever came back wrong.

What you need

- About two hours

What you will learn

- The basics of compute governance
- Explaining policy ideas clearly

Key terms

Compute governance

Using control over AI chips and data centres (who can buy, use or track them) as a lever for governing AI.

Compute
The raw computing power (specialised chips running for a long time) used to train and run AI models. Easier to measure and track than data or ideas.

Export controls
Government rules restricting which countries or companies can buy certain technologies, such as advanced AI chips.

Source and links

Sastry et al. — Computing Power and the Governance of AI (2024)
https://arxiv.org/abs/2402.08797

When you have finished

Write a few paragraphs on what you did, what you found and what you would try next, and share it with a friend, your society or online.

Try next: Estimate how much compute a famous model needed
https://ai-safety-sandbox.vercel.app/projects/fermi-estimate-training-compute/

Courses, mentors, small grants and communities:
https://ai-safety-sandbox.vercel.app/next-steps/

Questions? Ask in AI Safety Cardiff University (AISCU): https://aiscu.org/

Notes