Week 1: Us vs. the AI

CCGL9065: Our Response to Climate Change: HK2100

Dr. Hongshan Guo

2025-01-01

Table of contents

1 Course Overview

1.1 What This Course Is About

This is **not** a science course. This is a course about **narratives, choices, and power**.

Climate science has been settled for decades. Scientists have been warning us for 50+ years. Yet meaningful action remains elusive. Why?

The uncomfortable truth: Facts don't change minds. Stories do.

This course teaches you how to **stitch facts together with narratives** — arguments that are factual, but told in ways that leave bigger impressions. The goal: Turn data into **spectacles** that move people to action.

1.2 Course Format

- **When:** Wednesdays, 15:00–16:50
- **Where:** LE4
- **Structure:** 50 min lecture + 50 min activity
- **Assessment:** Participation + Midterm + Final Portfolio

1.3 How Each Week Works

Every week = a **new battlefield** of arguments. A new topic. New facts. New angles of attack.

1.3.1 The Weekly Rhythm

First 50 min (Lecture)	Second 50 min (Activity)
I present the facts	You share your homework
I present the stakes	You build group arguments
I give both sides ammunition	You present to the class
	You debate the other side

1.3.2 Your Tools

Your Notion Page (Personal Portfolio)

- Add research each week
- Grows all semester
- Becomes your final project foundation
- You own it

Slack Battlefield Channels

- Weekly debate channels (e.g., `#w1-battlefield-ai`)
- Share your best findings
- Discuss with classmates
- Everyone can see and learn from each other

1.3.3 The Weekly Flow

1. **Before class:** Research the topic → Add to your Notion page
2. **Post to Slack:** Share your best fact/story to the battlefield channel
3. **In class (first half):** I present ammunition for both sides
4. **In class (second half):** Groups synthesize, present, debate
5. **After class:** Best arguments get curated into the Channel Canvas

1.3.4 No Fixed Groups

You're not locked into a position or group. Week 1 you might argue PRO-AI. Week 2 you might switch to PRO-Climate. **Drift around. Explore different angles.** The goal is to understand all sides.

2 Today's Topic: AI & Climate

2.1 The AI Energy Crisis

Artificial Intelligence is rapidly becoming one of the largest energy consumers on the planet.

2.1.1 Key Statistics (2024–2030)

Metric	2024	2030 (Projected)
Global Data Centers	415 TWh	945 TWh
US Data Centers	183 TWh	426 TWh
AI Servers (US only)	53–76 TWh	165–326 TWh

Source: IEA Energy and AI Report

2.1.2 Comparisons That Matter

- **US data centers** use more electricity than Pakistan (240 million people)
- **Training one large AI model** = lifetime emissions of 5 cars
- **AI's carbon footprint (2025):** 32–80 million tons CO
- **Water consumed:** 312–765 billion liters

2.1.3 Where Does AI Get Its Power?

US Data Centers power mix (2024):

- Natural Gas: 40%+
- Renewables: 24%
- Nuclear: 20%
- Coal: 15%

Most AI runs on fossil fuels.

2.2 Countries Retreating from Climate Commitments

Country	Change
USA	Withdrew from Paris Agreement; no federal net-zero target
Turkey	Pushed net-zero from 2053 → 2070; coal production up 18%
Poland	Extended net-zero from 2050 → 2060; cut renewable subsidies 35%
Indonesia	Renewable targets cut from 23% → 18%; extended coal permits

The pattern: **Short-term economic interests beat long-term climate action. Every time.**

3 The Debate Framework

3.1 Two Worldviews

3.1.1 PRO-AI (Pro-Development)

Core belief: Progress is the solution, not the problem.

Arguments:

1. AI optimizes everything — energy grids, supply chains, agriculture
2. Economic growth lifts people out of poverty
3. Renewables need AI to manage intermittent power
4. The IEA says AI could reduce emissions by ~5% by 2035
5. Slowing down = falling behind China

Identity: Pragmatists. Builders. Realists.

3.1.2 PRO-US (Pro-Human)

Core belief: We can't tech our way out of a crisis caused by tech.

Arguments:

1. AI's energy costs are real and growing — benefits are theoretical
2. We already have solutions — policy, behavior change, existing tech
3. The poor pay the price — climate impacts hit the vulnerable
4. Tech companies have no accountability — "green AI" while burning coal
5. Every delay = lives lost

Identity: Humanists. Protectors. Truth-tellers.

4 How to Build a Story

4.1 The Formula

$$\text{Fact} + \text{Human Story} + \text{Stakes} = \text{Spectacle}$$

Level	Example
Weak	"AI uses a lot of energy"
Better	"AI uses more electricity than Pakistan"
Spectacle	"Your ChatGPT query costs a town its drinking water"

4.2 PRO-US: Stories That Scare

4.2.1 The Human Cost

- A Rice University student took their own life — the pressure of competing with AI, feeling replaceable, was part of their struggle.
- "AI is taking your job" — not in 10 years, but **now**. Customer service, coding, writing, design.

4.2.2 The Corporate Villain

- Big Tech is profiting off job opportunities that **went to PEOPLE** — and replacing them with algorithms.
- *"Every time you cheer for AI, you're voting to make yourself obsolete."*

4.2.3 The Exploitation Angle

- Data centers are built in poor communities. They get the pollution. Tech workers get the raises.
- "Green AI" is marketing. The coal plants are real.

4.2.4 Make It Personal

Don't Say	Say
"AI contributes to carbon emissions"	"Your kid's asthma inhaler? That's because a data center needed to generate your meme."
"Automation displaces workers"	"Your dad worked 30 years in logistics. ChatGPT just made him obsolete. And you're celebrating?"

4.3 PRO-AI: Stories That Inspire

4.3.1 The Productivity Revolution

- A single person can now do what took a team of 10
- Students in developing countries access world-class tutoring — for free
- Small businesses compete with giants because AI levels the playing field

4.3.2 The Innovation Hope

- AI is discovering new materials for solar panels, optimizing wind farms, predicting floods
- "The same technology that causes problems can solve them — if we invest"

4.3.3 The Realism Card

- "China isn't slowing down. Do you want zero influence on how AI develops?"
- Stopping AI won't bring jobs back. Adapting will create new ones.

4.3.4 Paint the Picture

Don't Say	Say
"AI improves efficiency"	"A farmer in Kenya used AI to diagnose her crop disease in 30 seconds. Her village didn't starve."
"We need technological progress"	"My grandmother was diagnosed with cancer. AI caught it 6 months earlier than her doctor would have. She's alive because of that."

4.4 The Key Insight

You're not lying. You're **selecting** which truths to emphasize. You're **framing** facts inside stories people can feel.

This is how every debate is won — climate, politics, business, life.

Your audience doesn't remember data. They remember how you made them feel.

Angry. Hopeful. Scared. Inspired. That's the spectacle.

4.5 But Here's the Rule: Every Story Must Be Fact-Checkable

This is the line between **persuasion** and **propaganda**.

4.5.1 Persuasion (OK)

- Selecting **real** facts
- Framing **verified** stories
- Emphasizing **documented** impacts
- Using **sourced** statistics
- Making real data **vivid**

4.5.2 Propaganda (NOT OK)

- Inventing stories
- Fabricating statistics
- Making up "examples"
- Exaggerating beyond evidence
- Claiming things you can't verify

4.5.3 The Test

Before you use a story, ask:

1. **Can I cite a source?** (news article, study, report)
2. **Could someone fact-check this?** (and find it's true)
3. **Am I framing reality or inventing it?**

If you can't answer YES to all three — don't use it.

4.5.4 Example: The Rice University Story

- **Fact-checkable:** Yes — this was reported in news media.
- **Verifiable:** The student's struggles with AI pressure were documented.
- **Framing:** We're emphasizing a real case to illustrate broader concerns.
- **NOT OK:** Claiming "hundreds of students have died because of AI" without evidence.

The story is powerful because it's real — not because we invented it.

Emotions need reality backing them. Your job: Find the real stories that make people feel. Not invent them.

5 Today's Activity

5.1 Instructions

5.1.1 Step 1: Divide Into Groups

- **Left side of room:** PRO-AI (Development)
- **Right side of room:** PRO-US (Human)

5.1.2 Step 2: Create Your Persona (5 min)

PRO-AI personas:

- Tech CEO building "green AI"
- Economist focused on growth
- Developing-nation minister needing energy
- Engineer optimizing power grids

PRO-US personas:

- Climate activist
- Community organizer in a polluted town
- Public health researcher
- Indigenous rights advocate

Ask yourself: Who am I? What's my story? What do I fear losing?

5.1.3 Step 3: Group Discussion (10 min)

Prepare **3 key arguments** for your side:

1. **Energy**: Is AI's cost justified?
2. **Solutions vs. Distractions**: Does tech help or delay action?
3. **Who pays?**: Who benefits, who suffers?

Remember: Don't just list facts. Tell a story. Make it emotional.

5.1.4 Step 4: Presentations (5 min each side)

Present your arguments. Make your audience *feel* something.

6 Key Takeaways

1. **Science is necessary but not sufficient** — narratives drive action
2. **AI is accelerating the crisis** — real costs, speculative benefits
3. **Countries are retreating** — short-term wins over long-term survival
4. **Your job this semester:** Argue all sides. Understand all sides. Build better stories.

7 Looking Ahead

7.1 Next Week: Food Systems

- What we eat is a climate choice
- You'll be assigned to **vocational groups**
- Same format: Pro-Climate vs. Pro-Development debate

Vocational Groups:

1. Logistics/Transportation
2. Farming/Food Procurement
3. Energy and Industry
4. Policy-Makers
5. Technology and Innovation
6. Service/Urban Workers

"We cannot solve our problems with the same thinking we used to create them." — Einstein