

AI in the Real World

Data, Power, & Society - Day 13

Case Design & Continuing Full Case I

CMSE 492 (aka CMSE 101) • Fall 2026

Prof. Danny Caballero

Today's Six Digits: 271059

CMSE 492 Attendance



Today: Work Time, Plus One New Thing

Most of today is more of what you started Monday: research and drafting for **Full Case I**.

- Keep narrowing domain → case → sources.
- Keep filling in **Section 0** as you go.
- Week 5 Update is due **Sunday, Oct 4**.

New today: we introduce the **Case Design** project, the assignment that runs alongside your Case Studies for the rest of the semester.

The Case Design Project

From Analyzing to Proposing

Your Case Studies **analyze** something that already happened. Case Design **proposes** something that should happen.

- Same DTPA framework but we reverse the direction.
- **One document that grows** over the whole semester: Scaffold 1 → Scaffold 2 → Final Case Design.
- Each version gets instructor feedback, and the next version must respond to it in writing.
- Teams of **3–5**, formed this week. *Can be your Case Studies group.*

Your Case Studies are your best preparation. Many strong Case Designs start from a case your group already analyzed.

Choose a Pathway

Pathway	Goal	You must deliver
I. Proactive AI Solution	Design an AI application that addresses a societal problem.	How it works through Data, Tools, Practices, Actions; its bias, ethical boundaries, and impact
II. Targeted AI Restriction	Propose a limit, safeguard, or policy constraint on a system with documented or predictable harm.	The risky system; evidence-based rationale; DTPA analysis of why it's needed and how it would work

A domain is not a topic — for either pathway.

Narrow until you can name *who* would use the system (I) or *which* system, enforced by *whom* (II).

What a Good Topic Looks Like

Pathway I

- **Too Broad:** "Use AI to improve city services."
- **Reasonable Start:** *A model that helps a mid-sized Michigan city predict which homes have lead service lines, designed so residents can see and challenge their home's prediction.* (Builds from the Flint Water Crisis.)

Pathway II

- **Too Broad:** "Regulate AI in insurance."
- **Reasonable Start:** *A requirement that any Medicare prior-authorization denial flagged by an algorithm be reviewed by a clinician in the same specialty before the patient is notified, with rates published quarterly.* (Builds on nH Predict.)

The test: could someone who disagrees with you argue against your proposal specifically? If the only objection is "AI is good/bad," it's still too general.

The Document: Three Growing Parts

Part	Due	Focus	Length
Scaffold 1	Fri, Oct 9	Problem, stakeholders, preliminary DTPA scoping	750 words
Scaffold 2	Fri, Nov 6	Full DTPA analysis, evidence base, design direction, response to Scaffold 1 feedback	1,500 words + response doc
Final Case Design	Fri, Dec 4	Complete draft proposal, response to Scaffold 2 feedback	3,000 words + response doc

Then: **Class Showcase** (Dec 7–11) and a **Final deliverable** (Tue, Dec 15).

You revise earlier sections in place as feedback comes in — this is one report, not three.

The template for Scaffold 1 is already on D2L.

What's Due This/Next Week



- **Form your Case Design team** (3–4 people) — can be your Case Study group.



- **Pick a pathway** (I or II) and a working topic — by **Fri, Oct 2.**



- Start **Section 0** of the Case Design template: links, notes, half-formed ideas.



Full template, milestones, and rubric-style checklists: [Case Design & Template](#)

Fri, Oct 9 is the next real deadline: **Scaffold 1**, *and* Full Case I Week 6 material continues due the same week.

Back to Full Case I

Full Case I: Where You Should Be

By now your group should have:

- A **specific case** — named tool, named organization, documented deployment — not just a domain.
- At least a few sources **about the case**, not just the domain.
- A first pass at what you know and don't know across **Data, Tools, Practices, Actions**.

If you're still holding a domain instead of a case, that's the most important thing to fix **today**.

Use the Rest of Class

- Keep researching and narrowing your case.
- Fill in **Section 0** of your Case Study tab.
- Start drafting answers to the **Week 5 Update** questions (case statement, sources so far, DTPA readiness, disagreements, plan for Week 6).
- If your Case Design team is different from your Case Study group, use a few minutes to sync on both.

Reminders

Exit Tickets, D2L, and the Course Website

- Complete today's Exit Ticket by 11:59pm (on D2L)
- **This week:** form your **Case Design** team and pick a pathway/topic — by Fri, Oct 2
- **Sun, Oct 4:** Week 5 Full Case I Update (Part A) due
- **Sun, Oct 4:** Individual Effort & Metacognitive Report due
- **Sun, Oct 4:** Week 5 domain review → Forum Post due
- **Fri, Oct 9:** Case Design Scaffold 1 due