

Lecture 1-3: Project topic and domain brainstorming

DATA 510: Data Science Capstone

Lucas P. Cordova, Ph.D.

2026-05-11

In-class networking and writing activity: students anchor their own interests and definition of impact, hold structured conversations with several classmates, then reflect on feedback and possible teammates. Delivers a single submission document aligned with early capstone teaming and topic exploration.

Table of contents

1	Activity overview (for students and instructors)	1
2	Learning objectives	2
3	Why we do this in week one	2
4	Flow of the activity (no fixed times)	3
5	Conversation norms	3
6	After today	4

1 Activity overview (for students and instructors)

This session is a **structured brainstorming and networking block**. The goal is not to finalize a proposal today. The goal is to **surface interests, pressure-test vague ideas in conversation**, and **collect early signals about who might make a strong project team**.

What students submit: One completed document using the course template. The template has three parts: a solo opening reflection (interests and what “impactful” means to them), a log of several peer conversations, and a closing reflection on feedback plus possible teammates.

Access the template file and make a copy of it: [template](#)

2 Learning objectives

2.1 Today’s objectives

2.2 What this session supports

1. **Articulated** the kinds of capstone topics and domains that genuinely interest you, and what you mean by an impactful project.
2. **Compared** your direction with several classmates in short, structured exchanges (not just small talk).
3. **Captured** themes, pushback, and new angles you heard from others.
4. **Noted** who might be a strong teammate match (skills, reliability, curiosity, complementary interests), without committing to a team yet.

This activity pairs with early DDS backlog thinking: many students arrive with one private idea; conversation quickly reveals data access, ethics, and scope issues they had not considered.

3 Why we do this in week one

3.1 Capstone quality starts with honest scope

Capstone projects fail gently when teams skip **early alignment**: mismatched ambition, unclear ownership, or a topic one person cares about and everyone else tolerates.

Today you generate **language** you can reuse in proposals later: domains, stakeholders, data types, and impact claims you can defend.

...

Deliverable today: one document, same template for everyone, submitted on Canvas.

4 Flow of the activity (no fixed times)

4.1 Three parts, one submission

Part 1: Solo anchor

Open the Word template and complete the opening prompts **before** you start circulating. This keeps the later conversations grounded in something you wrote down first.

Part 2: Structured conversations

Talk with **at least three to five** different classmates. Your job is to **exchange** interests, not to interrogate. Capture each conversation lightly in the template as you go or immediately after each chat.

Part 3: Reflection

Before submission, complete the reflection: how others changed your thinking, and whether anyone feels like a plausible teammate (with a short why).

If the room is loud, allow students to step into the hall in pairs for one or two conversations.

5 Conversation norms

5.1 Keep it useful and respectful

Do

- Offer one concrete angle (a data source, a metric, a stakeholder, a method) when you can.
- Ask permission before taking detailed notes about someone's personal situation.
- End each chat with "want to compare notes again after teams form?" if the chemistry was good.

Avoid

- Shooting down someone's idea in the first thirty seconds.
- Dominating airtime in a pair.
- Promising a team commitment today unless your instructor explicitly invites that.

6 After today

6.1 What happens next

Prof. Cordova will connect this activity to **team formation**, **proposal milestones**, and **Data-Driven Scrum** rituals. Keep the document: many teams reuse the language when they write their first backlog items.

...

Reminder: Submit the completed template through Canvas before you leave.