

AI Capstone: Milestone 2 Check-in (Week 6)

Focus: Demonstrating progress on data handling, feature engineering, and showing initial working code for baseline models or core system prototypes.

Requirements & Discussion Points:

Students should be prepared to discuss and demonstrate:

1. Data Status:

- Demonstrate the cleaned/prepared dataset(s). Discuss the cleaning/preprocessing steps undertaken.
- Show examples of generated data if simulation was used.
- Discuss any challenges encountered during data preparation and how they were addressed.

2. Feature Engineering (If Applicable):

- What features have been created or selected?
- Explain the rationale behind these features.

3. Baseline Model / Core Prototype:

- **Demonstrate runnable code** for at least a baseline ML model (e.g., Logistic Regression, simple CNN, basic clustering) trained on the prepared data OR
- **Demonstrate runnable code** for a core component prototype (e.g., a basic Flask/FastAPI endpoint structure that accepts dummy data, a basic Dash/Streamlit dashboard layout with placeholder data/plots).
- Discuss initial results or functionality. What worked? What didn't?

4. Updated Technical Approach:

- Have any initial technology choices changed based on experience so far? Why?
- Refined view on the specific models/algorithms to pursue next.

5. Progress & Planning:

- Review progress against the plan set in Milestone 1.
- Detailed task breakdown for the *next 3 weeks* (leading to Milestone 3), focusing on core model development and integration.
- Any adjustments to team roles or workflow.
- Revised assessment of risks.

Marking Scheme (Informal Discussion-Based Assessment - Total 20 points)

- **1. Data Preparation & Handling (4 points):**
 - (0-1) Data still messy or unusable; major issues unresolved.
 - (2-3) Data is mostly clean/prepared; minor issues remain or process could be clearer.
 - (4) Data is well-prepared, cleaning steps clearly explained and justified; simulation (if used) is reasonable.
- **2. Feature Engineering Rationale (If Applicable) (3 points):**
 - (0) Not applicable or features seem random/unjustified.
 - (1-2) Some features created/selected; rationale is partially explained.
 - (3) Features are relevant; clear justification provided for choices.
- **3. Demonstrable Code Progress (Baseline/Prototype) (5 points):**
 - (0-1) No runnable code or significant errors preventing demonstration.
 - (2-3) Basic code runs but is minimal or has noticeable issues; demonstration is shaky.
 - (4-5) Clear demonstration of a working baseline model or core prototype; code is understandable; initial results/functionality discussed.
- **4. Technical Adaptability & Understanding (3 points):**
 - (0-1) Sticking rigidly to initial plan despite issues OR changes lack clear reasoning.
 - (2) Some adaptation shown or understanding of next technical steps is adequate.
 - (3) Thoughtful adjustments to technical plan based on experience; clear understanding of next modeling/development steps.
- **5. Planning & Progress Review (3 points):**
 - (0-1) Little progress evident; plan for next phase is vague.
 - (2) Reasonable progress made; plan for next 3 weeks is outlined.
 - (3) Good progress demonstrated; detailed and realistic plan for Milestone 3 presented.
- **6. Professionalism & Collaboration (2 points):**
 - (0) Poor preparation or clear lack of collaboration within the group.
 - (1) Group shows adequate preparation and seems to be collaborating.
 - (2) Group is well-prepared, communicates effectively, evidence of strong collaboration.

Feedback: Verbal feedback will focus on the quality of the data work, the feasibility of the prototype/baseline, and the realism of the plan for core development.