AI Capstone: Milestone 1 Check-in (Week 3)

Focus: Solidifying the project scope, understanding the data landscape, planning the technical approach, and establishing a clear project roadmap.

Requirements & Discussion Points:

Students should be prepared to discuss and informally present the following:

1. **Refined Project Charter:**
   - Any modifications made to the initial project idea (scope adjustments, clarified objectives).
   - Clear articulation of the problem they are solving and the project's goal.
   - Confirmation of In-Scope and Out-of-Scope items.
2. **Data Acquisition & Initial Exploration:**
   - What data sources have been identified and accessed? (Show links, describe datasets).
   - What are the initial findings from exploring the data? (e.g., data formats, key fields, potential quality issues, volume).
   - What is the plan for data cleaning and preprocessing?
   - If using simulated data, what is the plan for generation?
3. **Proposed Technical Approach:**
   - What specific ML models, algorithms, or techniques are being considered? Why?
   - What technologies (programming languages, libraries, frameworks) will be used? (e.g., Python, TensorFlow/PyTorch, Scikit-learn, Flask/FastAPI, Docker, specific cloud services). Justify choices.
   - Initial thoughts on system architecture (e.g., data flow, API structure, dashboard components).
4. **Project Plan & Team Roles:**
   - Detailed task breakdown for the *next 3 weeks* (leading to Milestone 2).
   - Initial assignment of roles and responsibilities within the group.
   - Identification of potential risks or roadblocks and initial mitigation ideas.
5. **Questions & Challenges:**
   - What questions do you have? What challenges are you anticipating?

Marking Scheme (Informal Discussion-Based Assessment - Total 15 points)

- **1. Clarity of Project Definition (3 points):**
  - (0-1) Scope/goals are vague or unrealistic.
  - (2) Scope/goals are mostly clear but need minor refinement.
  - (3) Scope/goals are well-defined, clear, and seem achievable.
- **2. Data Understanding & Plan (3 points):**
  - (0-1) Data sources unclear or initial exploration is minimal; weak plan.
  - (2) Data sources identified, some exploration done; basic cleaning/prep plan exists.
  - (3) Clear understanding of data sources, good initial exploration insights; solid plan for cleaning/prep/simulation.
- **3. Technical Approach & Justification (3 points):**
  - (0-1) Technology choices seem arbitrary or inappropriate; approach unclear.
  - (2) Plausible technology choices and approach, but justification could be stronger.
  - (3) Well-reasoned technology choices and technical approach clearly articulated.
- **4. Project Planning & Risk Awareness (3 points):**
  - (0-1) Next steps unclear; minimal task breakdown or risk identification.
  - (2) Basic plan for next milestone exists; some thought given to risks.
  - (3) Detailed, realistic plan for next 3 weeks; roles considered; key risks identified with mitigation ideas.
- **5. Professionalism & Engagement (3 points):**
  - (0-1) Group seems unprepared, disengaged, or struggles to articulate progress.
  - (2) Group is generally prepared and engaged, answers questions reasonably well.
  - (3) Group is well-prepared, actively engaged, communicates clearly, asks thoughtful questions.

Feedback: Verbal feedback will be provided immediately during/after the discussion, focusing on strengths and areas for improvement leading into the next milestone.