Summary of Deployment and Feedback Phases in Data Science Methodology

1. Deployment Phase

- **Goal:** Make the data science model useful by integrating it into real-world applications.
- **Stakeholders:** Solution owners, marketing teams, developers, IT administrators.
- **Process:**
    - After evaluating the model, it is deployed in a controlled environment (limited users or test phase).
    - Business teams help translate model results for practical use.
    - Example: In a hospital case study, a risk assessment model was deployed for clinicians to identify high-risk patients.
    - The system provided real-time risk scores near discharge to help doctors take necessary actions.
    - Training for users (e.g., doctors, staff) and system tracking methods are established.

2. Feedback Phase

- **Goal:** Continuously refine and improve the model based on real-world results.
- **Process:**
    - Users provide feedback on model performance.
    - Data is collected to measure the impact (e.g., reduced hospital readmission rates).
    - No control/treatment groups for ethical reasons; instead, data before and after deployment is compared.
    - If necessary, new data (like pharmaceutical data) is incorporated to enhance predictions.
    - The intervention process itself may also be refined.
    - The improved model is redeployed, and the feedback cycle continues.

Key Takeaways

- Deployment ensures the model is used effectively.
- Feedback refines the model over time.
- The process is **cyclical**, meaning continuous learning and improvement.