**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.