3.Requirements Gathering

Stakeholder Analysis: Identifying key stakeholders is crucial for aligning the project objectives with business needs. The primary stakeholders include:

- **HR Managers:** Require insights to improve employee retention strategies.

- **Executives & Decision-Makers:** Need data-driven reports to optimize workforce planning.

- **Data Science Team:** Responsible for implementing and refining predictive models.

- **Employees:** Their feedback and concerns about workplace conditions impact the model's effectiveness.

User Stories & Use Cases:

- **User Story 1:** As an HR manager, I want to analyze employee attrition trends so that I can implement better retention policies.

- **User Story 2:** As a data scientist, I want to develop machine learning models to predict attrition so that the company can take proactive measures.

- **Use Case Example:** A company detects a high probability of attrition among mid-level employees and introduces targeted incentives to improve retention.

Functional Requirements:

- Data preprocessing and cleaning capabilities.

- Exploratory data analysis with visual insights.

- Predictive modeling using machine learning.

- Model evaluation and accuracy assessment.

- Reporting and visualization tools for HR professionals.

Non-functional Requirements:

- **Performance:** The system should process datasets efficiently within a reasonable timeframe.

- **Security:** Employee data must be anonymized and stored securely.

- **Usability:** The platform should have an intuitive interface for HR professionals.

- **Reliability:** The predictive model should maintain accuracy across different datasets.