**Assignment Overview**

As an AI engineer intern at Workplete, your task is to develop a prototype for a new AI employee that specialises in data analysis and reporting. This AI employee should be capable of processing large datasets, identifying trends, and generating insightful reports for the clients.

**Requirements**

**1. Data Processing**

- Implement a data ingestion module that can handle various file formats (CSV, JSON, Excel)

- Create a data cleaning and preprocessing pipeline

**2. Analysis Engine**

- Develop an analysis engine that can identify key trends and patterns in the data

- Implement at least three different statistical or machine learning algorithms for data analysis

**3. Report Generation**

- Create a module that can generate comprehensive reports based on the analysis results

- The reports should include visualisations (charts, graphs) and written summaries

**4. User Interaction**

- Design a simple command-line interface for users to interact with the AI employee

- Implement basic natural language processing to understand user queries related to the data analysis

**5. Documentation and Testing**

- Provide clear documentation for your code and the overall system architecture

- Write unit tests for critical components of your implementation