**1. Project Initialization Notebook**

* **Setup Environment**: Guide on setting up your Python environment and installing necessary libraries.
* **Initialize GitHub Repository**: Instructions for creating and managing your GitHub repository.

**2. Data Understanding Notebook**

* **Data Collection**: Steps to download and load the dataset.
* **Read and Explore Dataset**: Initial data exploration including data types, basic statistics, and understanding the dataset structure.

**3. Exploratory Data Analysis (EDA) and Statistics Notebook**

* **Exploratory Data Analysis**: Detailed EDA with visualizations to analyze distributions, correlations, and outliers.
* **Statistical Analysis**: Perform and document statistical tests to validate data insights and assumptions.

**4. Data Cleaning and Feature Engineering Notebook**

* **Data Cleaning**: Instructions and code for handling missing data, outliers, and data errors.
* **Feature Engineering**: Techniques for creating new features that could enhance model performance.

**5. Preprocessing Notebook**

* **Data Preprocessing**: Steps for scaling, transforming, and encoding data.
* **Data Splitting**: Code to split the data into training, validation, and test sets.

**6. Model Building Notebook**

* **Build Initial Models**: Code for building various machine learning models.
* **Model Evaluation**: Methods for evaluating models using cross-validation and other metrics.

**7. Hyperparameter Tuning and AutoML Notebook**

* **Hyperparameter Tuning**: Techniques and code for tuning model parameters.
* **AutoML Exploration**: Utilize PyCaret and AutoGluon to automate model selection and tuning.

**8. Final Model Training and Validation Notebook**

* **Train Final Model**: Code to train the selected model on the full training set.
* **Model Testing**: Evaluate the final model on the test set and document the results.

**9. Model Deployment Notebook**

* **Develop a Web Application** (Optional): Steps to create and deploy a Flask or Django app.
* **Prepare Model for Production**: Instructions for saving and deploying the model in a production environment.

**10. Documentation and Project Review Notebook**

* **Prepare Documentation**: Guidelines for documenting each phase of the project.
* **Project Review and Feedback**: Procedures for peer review and project reflection.