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|  | **Team members :**  **\_Mariam Maged Ezzat 21-00990**  **\_Maya Mohamed Khaled 21-01048**  **\_Maria Mohsen Fathy 21-00973**  **\_Febronia Attia Azmy 21-00712**  **\_Sherry Nabil Sidky 21-01630**  **\_Youstina Bassem Fathy 21-01759**  **Project name :**  **Cause of Death**  **Introduction:**  *This documentation provides a step-by-step guide to building and evaluating machine learning models using a dataset. We will cover data acquisition, preprocessing, model selection, training, evaluation, and performance comparison.*  ***\_\_\_\_\_\_\_\_\_\_\_\_\_\_*** **Step 1 (Data Acquisition):**  * Load the Dataset:   The first step is to load the dataset. In this example, the dataset is loaded from a CSV file using the pd.read\_csv() function from the pandas library.   * Data Exploration:   You can explore the dataset using various pandas functions such as head(), info(), and describe() to understand its structure, features, and summary statistics.  **Step 2 (Data Preprocessing):**   * Encode Categorical Variables:   Convert categorical variables into numerical format using one-hot encoding.   * Python. * Standardize Numeric Features:   Standardize numeric features to have a mean of 0 and a standard  deviation of 1   * Handle Missing Values:   Impute missing values using techniques such as mean imputation.  **Step 3 (Model Selection):**  * Choose Machine Learning Models:   Select appropriate machine learning models based on the problem type (e.g., classification, regression) and dataset characteristics.  **Step 4 (Model Training):**  * Train the Models:   Train the selected models using the preprocessed data.  **Step 5 (Model Evaluation):**   * Evaluate Model Performance:   Assess the performance of trained models using evaluation metrics such as accuracy, confusion matrix, and classification reporT   * Visualize Results:   Visualize the results using appropriate plots and graphs such as  ROC curves.  **Conclusion:**  This documentation outlines the essential steps involved in building and evaluating machine learning models using a dataset. It covers data preprocessing, model selection, training, evaluation, and performance comparison. Each step is accompanied by code examples to facilitate implementation.  **Code explanation:** | |  |
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