# ProjectInitializationandPlanningPhase

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| Date | 10-july-2024 |
| TeamID | 740106 |
| ProjectTitle | WalmartSalesAnalysisForRetailIndustrywithMachineLearning |
| MaximumMarks | 3Marks |

**ProjectProposal(ProposedSolution)report**

TheproposalreportaimstoenhancesalesforecastingforWalmartusingmachinelearning,boosting efficiency and accuracy. It tackles system inefficiencies, promising better operations,improved demand forecasting, and optimized inventory management. Key features include amachine learning-based salespredictionmodel andreal-timedataanalysis.

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| **ProjectOverview** |  |
| Objective | Theprimary objectiveistoimprovesalesforecastingforWalmartbyimplementing  advanced machine learning techniques,ensuringmoreaccurateandtimelypredictions. |
| Scope | Theprojectcomprehensivelyassessesandenhances the sales forecasting process,incorporatingmachinelearningforamore  robustandefficientsystem. |
| **ProblemStatement** |  |
| Description | Addressinginaccuraciesandinefficienciesinthecurrentsalesforecastingsystemthatadversely  affect operational efficiency and inventorymanagement. |
| Impact | Solving these issues will result in improvedoperational efficiency, optimized inventorymanagement,andanoverallenhancementinthesalesforecastingprocess,contributingto  customer satisfaction and organizationalsuccess. |
| **ProposedSolution** |  |
| Approach | Employingmachine learningtechniques to  analyzeandpredictsales,creatingadynamicandadaptablesalesforecastingsystem. |
| KeyFeatures | implementationofamachinelearning-basedsalespredictionmodel.  Real-timedataanalysisforquickerandmoreaccuratesalesforecasts.  Continuouslearningtoadapttoevolving  markettrends. |

# ResourceRequirements

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| **ResourceType** | **Description** | **Specification/Allocation** |
| **Hardware** |  |  |
| ComputingResources | CPU/GPUspecifications,numberofcores | T4GPU |
| Memory | RAMspecifications | 8GB |
| Storage | Diskspacefordata,models,andlogs | 1TBSSD |
| **Software** | | |
| Frameworks | Pythonframeworks | Flask |
| Libraries | Additionallibraries | scikit-learn,pandas,numpy,matplotlib,seaborn |
| DevelopmentEnvironment | IDE | JupyterNotebook,pycharm |
| **Data** | | |
| Data | Source,size,format | Kaggledataset,614,csvUCIdataset,690,csv |