

Project Initialization and Planning Phase

| | |
|---------------|---|
| Date | 15 April 2024 |
| Team ID | Team - 738203 |
| Project Title | Share Price Estimation Of TOP 5 GPU Companies |
| Maximum Marks | 3 Marks |

Project Proposal (Proposed Solution) template:

| Project Overview | |
|-------------------|--|
| Objective | Develop a predictive model using historical data and market trends to estimate share prices of the top 5 GPU companies, incorporating economic indicators and industry trends for accurate forecasting. |
| Scope | This project focuses on analyzing historical data and current market trends to predict share prices of the top 5 GPU companies, employing statistical and Machine learning techniques |
| Problem Statement | |
| Description | This project addresses the challenge of accurately predicting the share prices of the top 5 GPU companies by leveraging historical data and current market trends. Despite the availability of vast data, predicting stock prices remains complex due to market volatility and various influencing factors. By employing statistical and Machine learning techniques, the aim is to develop a robust predictive model that accounts for economic indicators, industry dynamics, and company performance to enhance investment decision-making and risk management strategies |
| Impact | The impact of this project extends to real-world investment practices by offering enhanced insights into the future performance of top GPU companies. Accurate share price predictions facilitate informed investment decisions, aiding investors in maximizing returns and minimizing risks. Additionally, the developed predictive model can serve as a valuable tool for financial analysts, portfolio managers, and individual investors, empowering them with actionable intelligence for optimizing investment strategies in the dynamic stock market environment. |

| Proposed Solution | |
|--------------------------|---|
| Approach | The approach involves collecting historical data and current market indicators of top GPU companies, preprocessing and analyzing the data, developing a predictive model using statistical and Machine learning techniques, and evaluating its accuracy for the share price estimation. |
| Key Features | Key features include data collection, preprocessing, analysis using statistical and Machine learning techniques, model evaluation, forecasting, interpretation of results, and clear reporting for stakeholders. Additionally, the project emphasizes accuracy, reliability, and actionable insights |

Resource Requirements

| Resource Type | Description | Specification/Allocation |
|-------------------------|---|--------------------------------------|
| Hardware | | |
| Computing Resources | CPU/GPU specifications, number of cores | 2 x NVIDIA V100 GPUs |
| Memory | RAM specifications | 8 GB |
| Storage | Disk space for data, models, and logs | 1 TB SSD |
| Software | | |
| Frameworks | Python frameworks | Flask |
| Libraries | Additional libraries | Sklearn, Prophet, Arima |
| Development Environment | IDE, version control | VS Code, Git |
| Data | | |
| Data | Source, size, format | Kaggle dataset, 2.43 MB, 9 csv files |