DEPARTMENT OF COMPUTER SCIENCE
ARTIFICIAL INTELLIGIENCE LAB
PROJECT PROPOSAL FORM

SEMESTER	Fall	Class and section	2022

TITLE OF PROJECT

CRYPTO PRICE PREDICTION

Group Members

EXECUTIVE SUMMARY OF PROJECT PROPOSAL

Summary:
Our machine learning-based system for crypto price prediction empowers users to make informed investment decisions by leveraging historical data and advanced algorithms. With accurate predictions at their disposal, users can confidently trade and maximize their returns in the cryptocurrency market. By providing enhanced value, reliability, and convenience compared to existing approaches, our system meets the needs of investors and traders, helping them stay ahead in the dynamic world of cryptocurrencies.

PROJECT PURPOSE, SCOPE AND OBJECTIVES

Project Background:
We propose a machine learning-based system that utilizes historical data and advanced algorithms to forecast cryptocurrency prices. By addressing the challenges posed by price volatility, this system empowers users to make informed decisions and maximize returns in the cryptocurrency market. Its reliable and accurate predictions, derived from robust data analysis and advanced machine learning techniques, provide users with confidence and guidance in navigating this dynamic market.
Project Scope:
Our project will focus on building a machine learning model using Tensor Flow, a powerful and widely adopted framework. We will gather comprehensive historical cryptocurrency price data and develop a model that captures the complex relationships and patterns within the market. The system will provide real-time predictions and visualizations through a user-friendly interface.

Objectives:

- Enable users to make better investment decisions by providing accurate crypto price predictions.
- Improve risk management strategies by identifying market trends and patterns.
- Optimize portfolio management through insights gained from the prediction model.
- Enhance user experience by offering real-time predictions and user-friendly visualizations.

PROJECT DESCRIPTION (most important part)

The four-step process for predicting cryptocurrency prices using LSTM neural networks involves:
1. Obtaining real-time cryptocurrency data by accessing APIs or using libraries that provide access to historical and real-time data.
2. Preparing the data for training and testing by applying data preprocessing techniques such as cleaning, normalization, and feature engineering. The data is then split into training and testing datasets.
3. Utilizing LSTM neural networks to predict cryptocurrency prices. The LSTM model is trained using the training dataset, and it learns patterns and dependencies in historical cryptocurrency data.
4. Visualizing the predicted prices by plotting them alongside actual prices to assess the model's performance. Graphs, charts, or other visualization techniques are used to compare the predicted and ground truth prices.

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This project is valuable because it combines the volatile nature of cryptocurrency markets with the power of LSTM neural networks. Predictive models can provide insights for traders, investors, and researchers, while visualization helps analyze the model's accuracy and identify areas for improvement.

TEAM PROFILE

ASSUMPTIONS AND CONSTRAINTS

Successful crypto price prediction faces challenges such as high market volatility, complex patterns, and data quality issues. Limited availability of historical data for cryptocurrencies adds to the complexity. Our project utilizes TensorFlow and relevant data preprocessing libraries to develop a machine learning model that runs on standard hardware. With our expertise and robust system, we offer accurate predictions that revolutionize decision-making in the cryptocurrency market. Embracing our project addresses market challenges and enhances profitability in crypto trading.

PROJECT DELIVERABLES NOT CHANGEABLE

Deliverables include

- Software Project Proposal. • Project progress • Project report (template will be uploaded) • Team member's work, as per their contribution, you should have to be honest with your future.

Time Line

ITEM	DATE	SIGNATURE
Group Member Names		
Project title		
Project Proposal + classes name		
Project Structure Diagram + Data Sample		
Project Prototype		
Project Review 1		
Project Review 2		
Project Submission		

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For Teacher Use Only

REMARKS

Course Teacher		**Signature**		**Date**	
Name		**Signature**		**Date**	