Department of Computer Science
Minor Project

Stock Visualization & Trend Prediction

Team Members:-

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Guided By:-

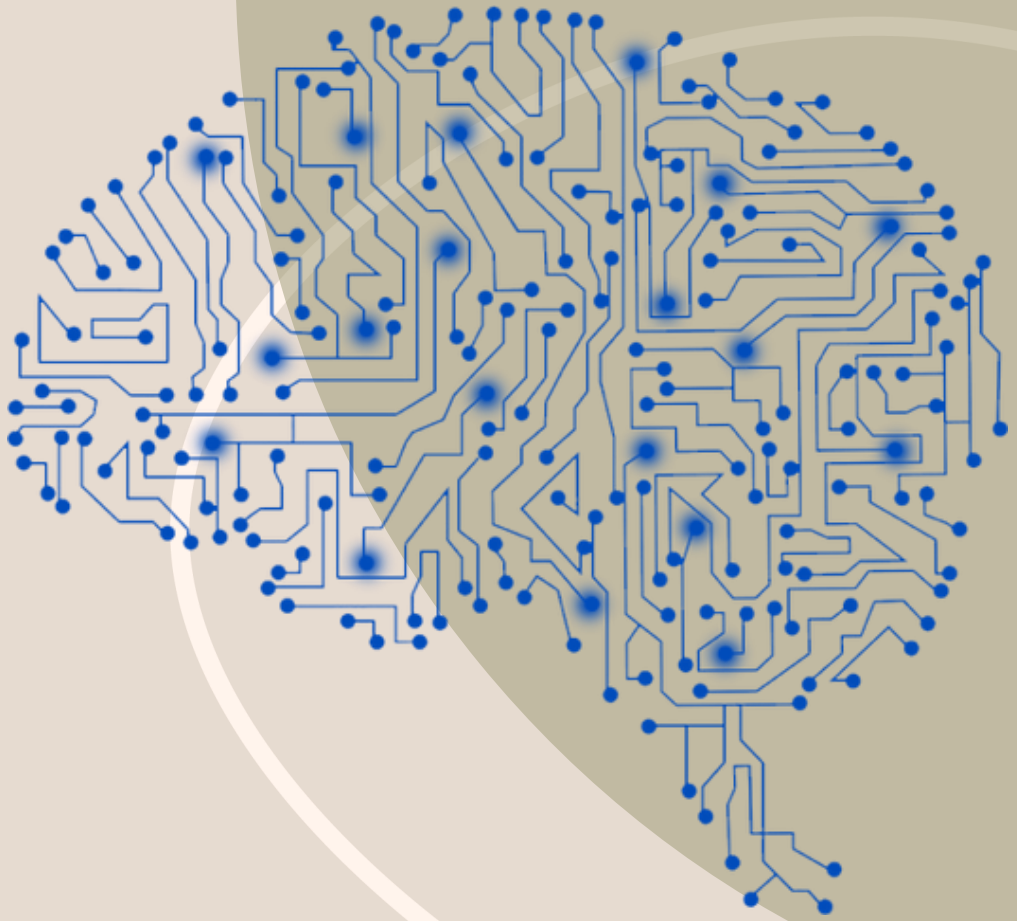
Prof. Aakanksha Jain

Introduction

Our project is Stock Visualization & Trend Prediction, In this project we used machine learning to predict stock market trends and visualised them in a dashboard.

The main goal was to create a ML model that can be used to stock traders and financial analyst to be able to get a idea of the future market trends.

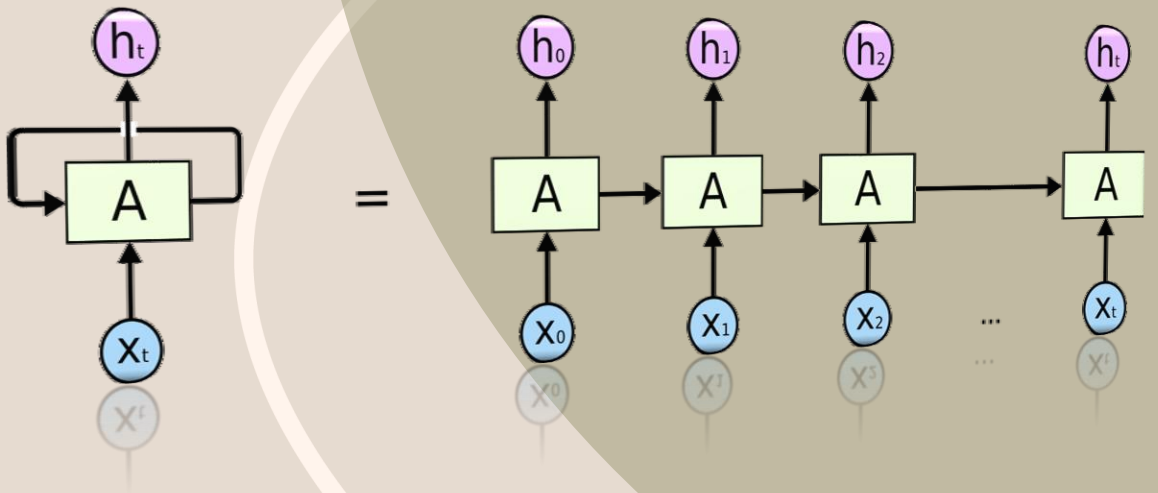
We have created a web app that ask the user about the name of the stock which is needed to be analysed then our machine learning model predict the required output for the user.



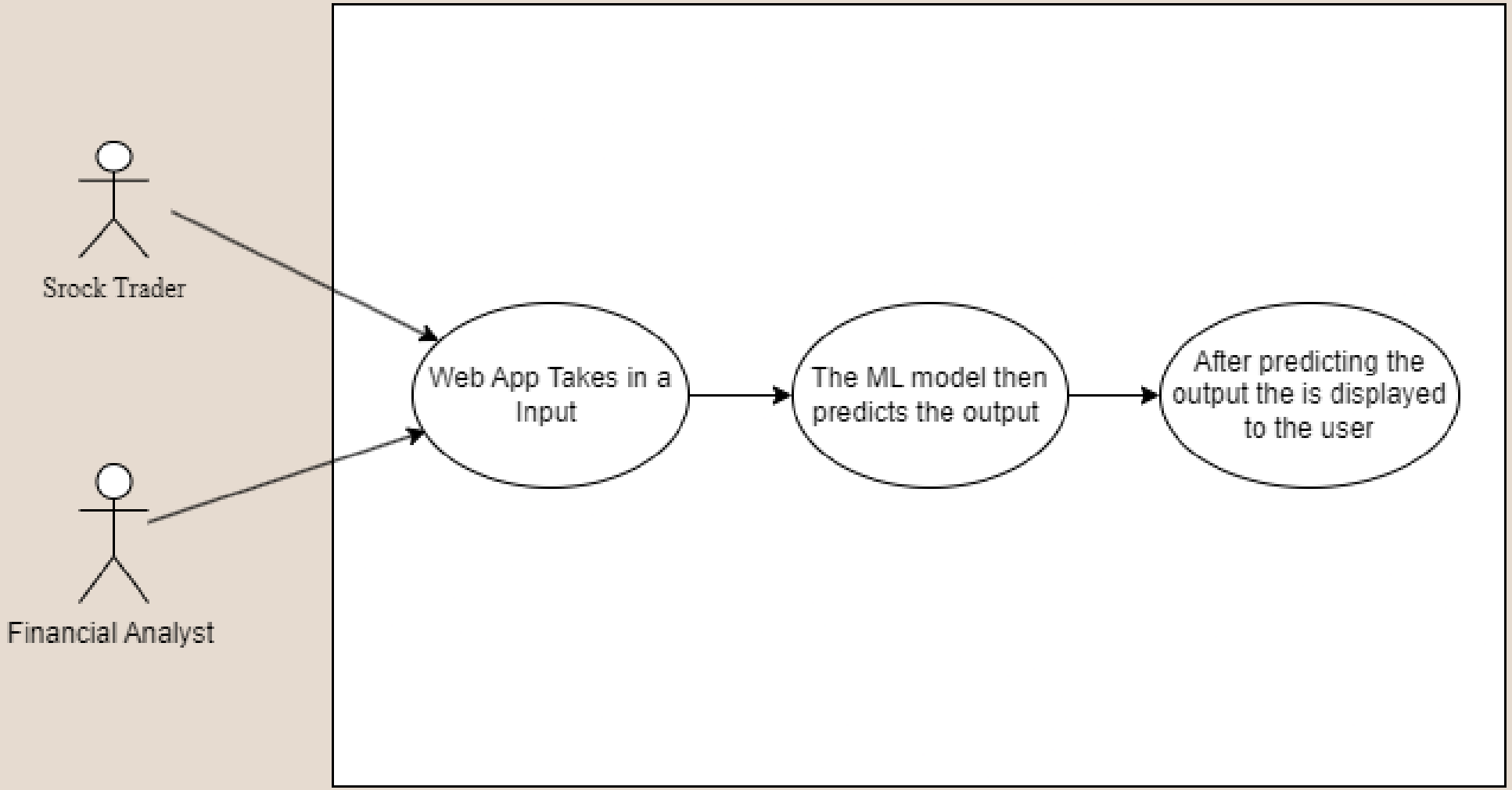
About Project

This project is based upon LSTM(Long Short Term Memory) model which is a type of of RNN. Long Short Term Memory networks – usually just called “LSTMs” – are a special kind of RNN, capable of learning long-term dependencies. They were introduced by Hochester & Schmid Huber (1997), and were refined and popularized by many people in following work.1 They work tremendously well on a large variety of problems, and are now widely used.

LSTMs are explicitly designed to avoid the long-term dependency problem. Remembering information for long periods of time is practically their default behavior, not something they struggle to learn

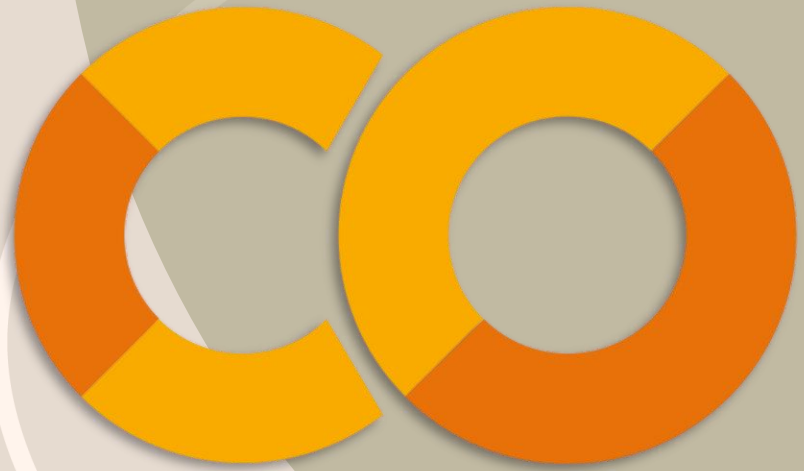


Use Case


Srock Trader
Financial Analyst
Web App Takes in a Input
The ML model then predicts the output
After predicting the output the is displayed to the user

Language & Tools

Python



Google Colab

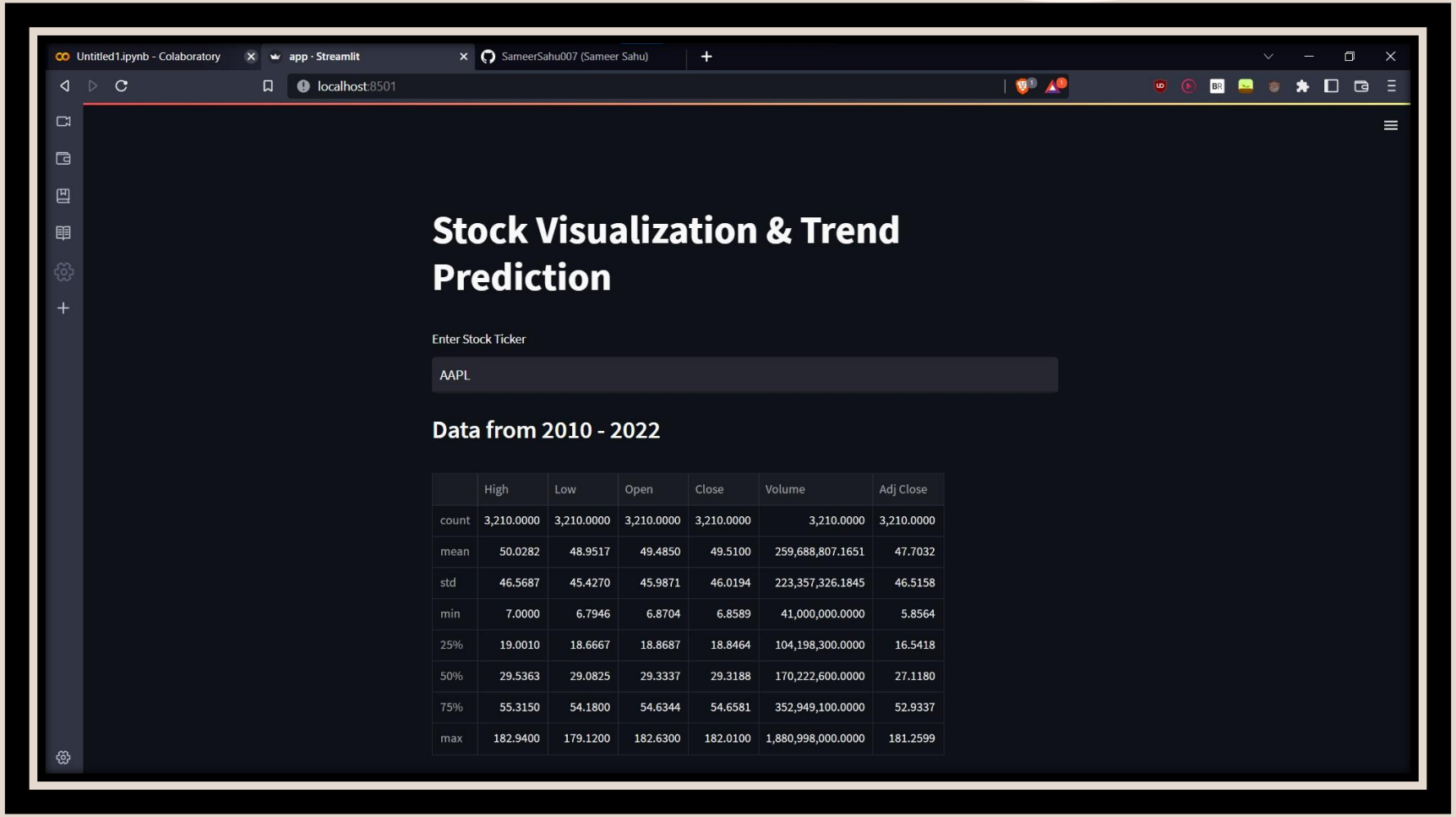
System Requirements

Ram : 4GB (minimum)
8GB (maximum)

HDD/SSD : 500 GB
-requires at least 2 GB of free space

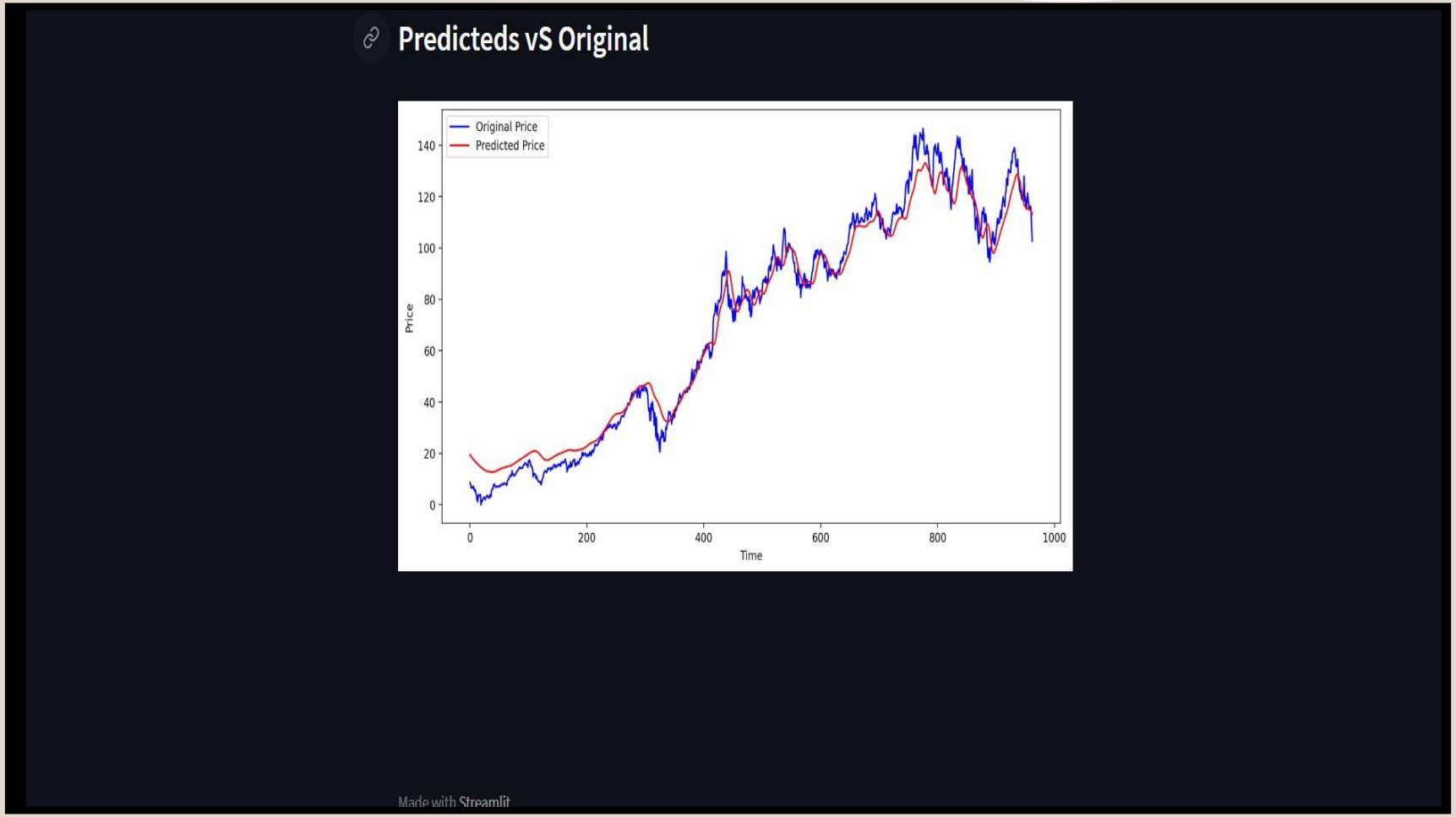
O.S : Windows 8/8.1/10/, Linux, MacOS

Glimpse of the Project



	High	Low	Open	Close	Volume	Adj Close
count	3,210.0000	3,210.0000	3,210.0000	3,210.0000	3,210.0000	3,210.0000
mean	50.0282	48.9517	49.4850	49.5100	259,688,807.1651	47.7032
std	46.5687	45.4270	45.9871	46.0194	223,357,326.1845	46.5158
min	7.0000	6.7946	6.8704	6.8589	41,000,000.0000	5.8564
25%	19.0010	18.6667	18.8687	18.8464	104,198,300.0000	16.5418
50%	29.5363	29.0825	29.3337	29.3188	170,222,600.0000	27.1180
75%	55.3150	54.1800	54.6344	54.6581	352,949,100.0000	52.9337
max	182.9400	179.1200	182.6300	182.0100	1,880,998,000.0000	181.2599

Glimpse of the Project



thank you