IBM Coursera

Applied Data Science Capstone

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Predicting Inflation Report

Oscar Holguín

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1. Introduction

1.1. Background

Inflation is defined as the rise of prices of most goods and services of daily or common use. This services and goods include food, clothing, housing transport recreation among others []. The inflation index measures the change in prices of the basket of commodities and services over a period of time. This period of time is usually per month, or yearly but it can vary. When measuring inflation, you do so in percentage and it represents the measure of the purchasing power of a given population who uses a specific currency. The purchasing power of the population is indirectly proportional to inflation, thus when inflation rises it means people are able to afford less goods and services than before. One common problem in different countries is that sometimes inflation rises more than wage increments.

1.2. Problem

The main problem with the inflation index is that inflation is highly volatile and thus difficult to predict. Inflation usually gets most of the people unprepared and results in a painful strike to their economy. It is the aim of this project to try to use different machine learning approaches to choose the best model that is able to predict this index. This would help people to be prepared, or save money when inflation is about to rise.

1.3. Interest

This project would result interesting to the general public, since everyone wants to be prepared for inflation changes. Economists might also be interested in this approach for their specific applications. Lastly this will also be of special interest to the government because they can also be prepared and use this information to make new policies, or efficient decision making.

2. Data

2.1. Data Acquisition

For this project, the data will be of Mexico's inflation. The data considered will be mainly the national inflation and maybe some major cities or cities which inflation usually varies such as , Monterrey, Gudalajara or border city Cd. Juárez. The data is provided by an official institution called Banco de Mexico and INEGI (Instituto Nacional de Estadística y Geografía), both institutions provide this information, INGEI is the one currently in charge, but historical data is found in Banco de Mexico. A third institution, Banxico, gathers all the data provided by the aforementioned institutions and displays it in their official website, with a more understandable and clean way. Therefore in this project the data will be acquired from scraping `https://www.banxico.org.mx/tipcamb/main.do?page=inf&idioma=sp`