Optimum and Adaptive Signal Processing

Project Description

I. Introduction

The data that I've decided to process is BitCoin data from the *Nasdaq Data Link* database. Nasdaq is a cloud-based technology platform that provides real-time market data and is used by analysts from top-data driven organizations.

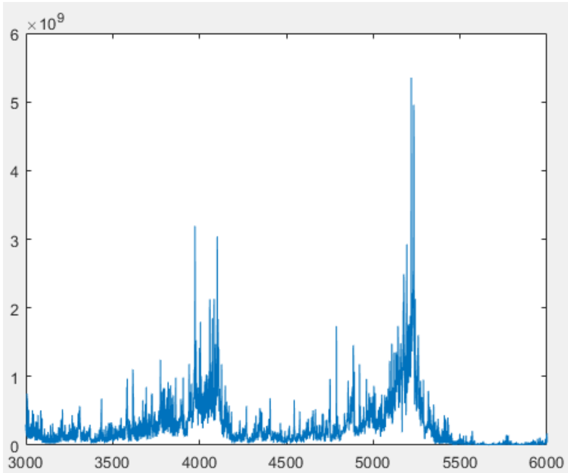

Figure 1. BitCoin prices between 2015-11-02 and 2024-01-19

The first filter that I'm going to use is an *Adaptive Predictor* that will in theory predict future BitCoin prices. The second filter that I'm going to use is an *Adaptive Moving Average* filter. Due to how volatile BitCoin data is, rapid changes can be hard to analyze. By using AMA the data can be smoothed while filtering noise.