In this thesis, I employ a number of machine learning (ML) methods on the inflation forecasting problem space. I utilize macroeconomic indicators alongside textual data and apply ML methods to an updated time horizon. Ultimately, I find that ML methods are a viable alternative to traditional benchmarks under certain time horizon conditions, particularly with the inclusion of textual data. However, in contrast with the previous literature, I demonstrate that some ML models are particularly sensitive to the treatment of outliers. When a full time horizon is employed and outliers are included, certain ML models that performed well in previous analyses are not able to outperform other forecasting methods.