**Project Structure**

Title: ***News Headlines Sentiment Analysis for Cryptocurrency Price Forecast: The ChatGPT Approach***

Objectives:

* Inspired by *Can ChatGPT Forecast Stock Price Movements? Return Predictability and Large Language Models, (Lopez-Lira and Tang, 2023).*
* Experiment with chatgpt for news headlines sentiment analysis on Altcoin market. (**May use PaLM as alternative due to region block)**
* Conduct comparative experiment with other sentiment analysis approaches.
  + More basic LLMs as presented in *Can ChatGPT Forecast Stock Price Movements? Return Predictability and Large Language Models*
    - BRET
    - GPT 1 & 2
  + Conventional Approaches (if time permits)
    - Sentiment Score
      * *Stock Prediction by Integrating Sentiment Scores of Financial News and MLP-Regressor: A Machine Learning Approach, (Maqbool et al., 2023)*
        + Vader
        + TextBlob
        + Flair
    - Sentiment dictionary mapping
      * *News impact on stock price return via sentiment analysis, (Li et al., 2014)*
        + Harvard IV-4 sentiment dictionary
        + McDonald financial sentiment dictionary

Data:

* <https://cryptonews-api.com> should try
* >55970 (growing) headlines which are pegged to 327 token assets. (from Crypto Panic, a crypto news aggregation api)
* Tick level trading data for 327 token assets (from OKX)

Metrics:

* Panel VAR
  + Impulse analysis
  + Granger causality

Empirical Design (subject to change):

A diagram of a block diagram

Description automatically generated

*Example prompt:*

Screens screenshot of a computer

Description automatically generated

*PaLM 2 Bison*