# API documentation

## AlphaVantage

For information on how to use AlphaVantages API, please visit <https://www.alphavantage.co/documentation/>

### Our use for AlphaVantage

Our backend makes use of the AlphaVantage API in many different ways. The main functionality we use is to pull the historical data of a stock, their current company overview, and current financial data that is related to their company. This data is used in a series of python functions that create a json response that we are able to perform our calculations on before putting the results in a dictionary that our angular app can access.

# Stocko API

## Personal Portfolio

**Data Model**

| **Name** | **Type** | **Description** |
| --- | --- | --- |
| portfolio\_pct\_chage | double | This tracks the percentage change of based off the total value of all your positions |
| portfolio\_profit | double | This tracks the total profit based off of all of your positions |
| avg\_price | double | This is the average price of the stock. Entered by user |
| pct\_change | double | This tracks the percentage change in price based on the stock position individually. |
| price | double | This is the current price of the stock |
| profit | double | This is the current profit of the individual position you are looking at. |
| qty | double | This is the number of shares you hold of a certain stock. |
| ticker | string | This is the NYSE ticker of the particular stock you are looking at. |

**Endpoints**

**GET /personal-portfolio/<username>**

Description: lists the positions of the specified user. Outputs portfolio\_pct\_chage, portfolio\_profit, avg\_price, pct\_change, price, profit, and qty of the user’s portfolio. If the user does not exist, it will return an HTTP error asking you to ensure the username is valid.

Request Example: GET /personal-portfolio/obradymack

Response Example: {

"Data":{

"Portfolio\_pct\_chage":1.01,

"portfolio\_profit":4150.74},

"Response":[

{

"avg\_price":"196",

"Pct\_change":1.0,

"Price":391.54,

"Profit":977.7,

"Qty":"5",

"ticker":"TEAM"

},

{

"avg\_price":"30",

"pct\_change":-0.34,

"price":19.72,

"profit":-123.36,

"qty":"12",

"ticker":"F"

}

]

}

**PUT /personal-portfolio/<username>**

Description: Request to edit a position in the specified user’s portfolio. When successful, it will return a status of 200 and a message saying the ticker is updated. If the user does not exist, it will return an HTTP error asking you to ensure the username is valid. If the user does not enter one of the required fields, it will return a status of 200 and an HTTP error asking that the user ensure that all required fields are filled. If the position fails to update for a reason that is not the user’s fault, an HTTP error will appear saying “Could not edit” + ticker.

Required Fields: ticker, avg\_price, qty

Request Example: PUT /personal-portfolio/obradymack

{

"ticker": "AAPL",

"avg\_price": "90",

"qty": "5"

}

Response Example: AAPL Updated

**POST /personal-portfolio/<username>**

Description: Request to add a position in the specified user’s portfolio. When successful, it will return a status of 200 and a message saying the ticker has been added. If the user does not exist, it will return an HTTP error asking you to ensure the username is valid. If the user does not enter one of the required fields, it will return a status of 200 and an HTTP error asking that the user ensure that all required fields are filled. If the user attempts to add a position that already exists, it will return a status of 200 and an HTTP error telling the user that the position already exists.

Required Fields: ticker, avg\_price, qty

Request Example: POST /personal-portfolio/obradymack

{

"ticker": "AAPL",

"avg\_price": "90"

"qty": "5"

}

Response Example: Added position AAPL successfully

**DELETE /personal-portfolio/<username>**

Description: Request to delete a position in the specified user’s portfolio. When successful, it will return a status of 200 and a message saying the ticker has been deleted. If the user does not exist, it will return an HTTP error asking you to ensure the username is valid. If the user does not enter one of the required fields, it will return a status of 200 and an HTTP error asking that the user ensure that all required fields are filled.

Required Fields: ticker

Request Example: DELETE /personal-portfolio/obradymack

{

"ticker": "AAPL"

}

Response Example: AAPL Deleted!

## User

**Data Model**

| **Name** | **Type** | **Description** |
| --- | --- | --- |
| username | string | This is the username that will be stored in the mongoDB. It is used to access the personal portfolio |

**POST /user/<username>**

Description: Request to add a user into our mongoDB. When successful, it will return a status of 200 and a message saying the user has been added. If the user already exists or the username field was not filled, it will return an HTTP error that the user could not be added.

Required Fields: username

Request Example: POST /user/obradymack

{

"username": "obradymack"

}

Response Example: Added obradymack

## Stock Price

**Data Model**

| **Name** | **Type** | **Description** |
| --- | --- | --- |
| ticker | string | This is the NYSE symbol used to represent a stock |
| price | double | The current price of the ticker (may not be real time) |

**GET /stock-price/<ticker>**

Description: Request to retrieve a price of a stock. When successful, it will return a status of 200 and a message stating the price of the entered ticker. If the ticker does not exist or the ticker field was not filled, it will return an HTTP error that the price could not be retrieved.

Required Fields: ticker

Request Example: GET /stock-price/AAPL

{

"ticker": "AAPL"

}

Response Example:

{

"price":"160.63"

}