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HW1\_1.py computes part a and b of the homework, i.e it downloads stock information from Russell 1000 and computes the day to day.

**To use HW1\_1.py**:

Python HW1.py russell\_1000\_ticker.txt output.csv outputlogR.csv

Stat.py computers part c and d of the homework, i.e. performs an OLS and iterates over many choices

**To use stat.py**:

Python stats.py outputlogR.csv ResultsFile.csv

Points to note:

* I was unable to download all 1000 stocks. I obtained the first 205 from the list in the file russell\_1000\_ticker.txt
* My method for choosing the 10 stocks was to pick them randomly.

Using 205 stocks, the following group of 10 stocks had the highest R2

CA

BF.B

BXP

AIV

AMG

AAP

ALL

BKD

AZO

ABBV

**Table of Stocks and their respective R2**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  | **R squared** |
| ^RUI | CA | BF.B | BXP | AIV | AMG | AAP | ALL | BKD | AZO | ABBV | 0.053820 |
| ^RUI | AON | AFL | CIM | ARMK | ATI | ALXN | ACM | CHK | AGN | BG | 0.034241 |
| ^RUI | A | CRL | ADP | AGN | AMAT | BMRN | CBL | AAP | BDN | AME | 0.033142 |
| ^RUI | ADM | Y | ADSK | MMM | AR | LNG | ALNY | BEAV | BLK | ALTR | 0.032758 |
| ^RUI | AVGO | AFSI | LNT | BAX | AEP | AZO | AWK | BAC | AAP | BIIB | 0.032541 |
| ^RUI | BWA | BRCM | BSX | AMT | AXTA | AIZ | ARMK | Y | AYI | ARG | 0.031627 |
| ^RUI | AAN | AVGO | A | CBG | AAPL | T | APD | BDN | ABBV | ALL | 0.031521 |
| ^RUI | ARG | BBY | BMRN | AGCO | AAN | AFSI | BRO | ALGN | AAL | CNP | 0.027839 |
| ^RUI | CTL | BHI | BRCD | ATVI | AWK | BBY | ATI | ADP | CRL | CPB | 0.027086 |
| ^RUI | ARG | T | ATR | CELG | CAB | BKFS | AMP | BKD | ACC | BMS | 0.026144 |
| ^RUI | BRKR | AVGO | AVB | ADP | BOKF | AXTA | DOX | ALLE | AXS | ACGL | 0.023701 |
| ^RUI | AES | LNT | ALL | AVGO | AMZN | CTRX | APA | CVC | ALR | BA | 0.020833 |
| ^RUI | CA | BMS | ALGN | AKRX | ATO | CVX | MMM | BKFS | HRB | EAT | 0.020574 |
| ^RUI | AMCX | ALNY | AFG | ALB | AEP | ADBE | CCL | ACN | COF | CSL | 0.018552 |
| ^RUI | AWK | AAN | ATML | CAB | CHTR | CAR | BRCM | ATHN | BWA | CBL | 0.017517 |
| ^RUI | BKD | BIIB | BLL | ARMK | ANSS | AZO | AME | BR | ADS | APD | 0.016704 |
| ^RUI | APD | AGCO | ACGL | AHL | CERN | CCL | ARG | CIM | ADS | FOX | 0.016047 |
| ^RUI | ACM | AGO | NLY | BRX | ACC | CPB | AA | ATML | MMM | CBI | 0.015136 |
| ^RUI | AAN | CSL | ALB | AFSI | AON | ATHN | CRI | DOX | ALXN | ALK | 0.010398 |
| ^RUI | AET | BBT | CPN | BRX | HRB | AMH | ADS | ALK | AMCX | CSL | 0.010149 |