

**Title:** Study of loan data in correlation with stock market prices

- **Team members:** Spencer Hanson, William Brickowski, Ben Miller, Max Moghadam
- **Team members:** first and last name of each member
- **Description:** We would like to find different stock patterns that could affect loan patterns. Also if certain stocks are good indicators of how people are treating loans.
- **Prior Work:** There are many articles on people determining if taking out loans is a good idea to invest into the stock market, but not much has been researched into the correlation between the two.
- **Datasets:**
  - Using <https://www.barchart.com/> API, from the article
  - <https://www.linkedin.com/pulse/how-get-free-intraday-stock-data-python-barcharts-ondemand-cfa/>
  - [http://www.freddiemac.com/research/datasets/sf\\_loanlevel\\_dataset.html](http://www.freddiemac.com/research/datasets/sf_loanlevel_dataset.html) Loans dataset
  - We have links to download it, but working on getting an external hard drive to download it to, also access to the free API
- **Proposed work:** what do you need to do?
  - Data cleaning: Some of the dates in the dataset are different, so we will need to standardize it
  - Data preprocessing: Will need to filter out some of the useless data columns
  - Data integration: Mixing the loans with the stock prices by date
- **List of tool(s):** Python, Pandas, Numpy, SciKit-Learn
- **Evaluation:** Use a correlation formula to calculate the highest stock in regards to loans