## Computation, Problem Set #4, Pandas and Solvers

OSE Lab

Due Monday, August 5 at 11:00pm

Do the following Exercises from the Brigham Young University Applied Mathematics and Computational Emphasis (ACME) Python labs Humpherys and Jarvis (2017).

1. **Exercises from ACME: Pandas 1 lab.** Do problems 1 through 4 from Pandas 1 lab.

2. **Exercises from ACME: Pandas 2 lab.** Do problem 1 from Pandas 2 lab. You will need to download the titanic.csv file, which is saved in the course repository.

3. **Exercises from ACME: Pandas 3 lab.** Do problems 1 and 2 from Pandas 3 lab. You will need to import the `iris`, `poisons`, and `diamonds` datasets from the `pydataset` module using command `import pydataset as data`. You will also need to download the titanic.csv file, which is saved in the course repository.

4. **Exercises from ACME: Pandas 4 lab.** Do problems 1, 2, 5, and 6 from Pandas 4 lab. You will need to download the DJIA.csv and paychecks.csv files, which are saved in the course repository.

5. **Exercises from ACME: Conditioning and Stability lab.** Do problems 1 through 6 from Conditioning and Stability lab. You will need to download the stability_data.npy file, which is saved in the course repository.

6. **Exercises from ACME: Iterative Solvers lab.** Do problems 1 through 7 from Iterative Solvers lab.

7. **Exercises from ACME: Newton and Quasi Newton Method lab.** Do problems 1 through 5 from Newton and Quasi Newton Method lab.

# References

**Humpherys, Jeffrey and Tyler Jarvis**, "Computational Labs for Foundations of Applied Mathematics, Volumes I and II," 2017.