**CLASS SCHEDULE: Data Bootcamp**

**Spring 2023**

*Topics and deliverables subject to change*

* Remember that this class is built with students with **no prior coding experience** in mind
* You will encounter challenges every week that will stretch your abilities, but you will be graded primarily on conceptual understanding, not on deploying enterprise-level code

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| **Class** | **Date** | **Session topics** | | **Deliverables due** |
| 1 | Feb. 2 | Python fundamentals | * Class introduction * Data types and variables * Control structures |  |
| 2 | Feb. 9 | * Lists, tuples, dictionaries * Accessing, indexing, subsetting, modifying * Other data structures | Assignment 1 |
| 3 | Feb. 16 | * Functions * Classes * Libraries / modules | Assignment 2 |
| 4 | Feb. 23 | Pandas | * Data types and data cleaning * Reading and writing data from csv and Excel * Data cleaning, transformation | Assignment 3 |
| 5 | Mar. 2 | * Summarizing data * Filtering and selecting * Merging, shaping, and joining | Assignment 4 |
| 6 | Mar. 9 | Visualization | * Matplotlib * Chart types: lines, scatters, bars, histograms * Customizing, designing, saving images |  |
|  | Mar. 16 |  | * No class – Spring break |  |
| 7 | Mar. 23 | Data access, storage | * SQL * Integrating Python with SQL | Midterm project |
| 8 | Mar. 30 | * Introduction to web scraping * Cleaning unstructured data from scraping * Introduction to APIs | Assignment 5 |
| 9 | Apr. 6 | Getting value from data | * Dealing with missing data * Data types: categorical, numeric, text, ordinal * Scaling and normalization techniques | Assignment 6 |
| 10 | Apr. 13 | * Business case studies | Assignment 7 |
| 11 | Apr. 20 | * Time series * Visualizing series data * Basic forecasting |  |
| 12 | Apr. 27 | * Interactive dashboards with Plotly * Dashboard and visualization best practices | Assignment 8 |
| 13 | May 4 | Final | * Final presentations | Final project |
|  | May 11 |  |  | Final exam |