# UIUC STAT 430 - Fall 20

## Announcements

- Exam 1 (exams.html) details are now posted in the Exams tab.
    - Exam 1 will be at 7:00 PM - 8:30 PM Champaign Time on Thursday, 10/01/2020.
- **Click here for the week 6 material!**
    - No lab or homework assignment this week.
- You can find the homework solution here (https://github-dev.cs.illinois.edu/stat430-fa20/_hw-soln).
- **Deadlines for Week 6**:
    - HW 4 - 105%: 11:59 PM Tue, 09/29/2020.
    - Lab 05: 11:59 PM Wed 09/30/2020.
    - HW 4 - 100%: 11:59 PM Fri 10/02/2020.
    - HW 4 - 80%: 11:59 PM Sun 10/04/2020.

*You can find reminders on homework deadlines, upcoming exams, changes to the office hours schedule (if needed), etc. here! Make sure you check this section **at least once a week**!*

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## Office Hours

- Join the office hours on Zoom (https://illinois.zoom.us/j/94059356161?pwd=TUEvNWJIbkIvVEZKSDV3LzBqc3IxQT09)!
- Ha's Office Hours:
    - Tuesday: 7:00 PM - 8:00 PM
    - Wednesday: 9:00 AM - 10:00 AM and 7:00 PM - 8:00 PM
- Abhishek's Office Hours: 3:00 PM - 5:00 PM Monday.

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# Week 1 | **08/24/2020 - 08/30/2020**

## Lectures

| Topic | Video | Mirror | Notes |
| --- | --- | --- | --- |
| 1.1 Welcome to STAT 430! | [YouTube] (https://youtu.be/bCbRlBMm33M) | [Media Space] (https://mediaspace.illinois.edu/media/t/1_3o1mi0el) | [Syllabus] (syllabus.html) |
| 1.2 Installing Python & git | [YouTube] (https://youtu.be/xQh71Z5qkIg) | [Media Space] (https://mediaspace.illinois.edu/media/t/1_06s504jg) | [Windows] (windows-setup.html) [Mac] (osx-setup.html) [git] (git-set-up.html) |
| 1.3 Intro to Jupyter Notebook | | | [lab01] (lab01.html) |
| 1.4 Basics of Programming | [YouTube] (https://youtu.be/Yf9Tbn8dbtc) | [Media Space] (https://mediaspace.illinois.edu/media/t/1_utn28ukj) | [1.4] (files/lectures/lec1-4.html) |

# Week 2 | 08/31/2020 - 09/06/2020

## Lectures

| Topic | Video | Mirror | Notes |
|---|---|---|---|
| 2.1 Data Types | [YouTube] (https://youtu.be/Rq6iYqApEI0) | [Media Space] (https://mediaspace.illinois.edu/media/t/1_vt3vejec) | [2.1] (files/lectures/lec2-1.html) |
| 2.2 Control Flow | [YouTube] (https://youtu.be/ylyP3-fK7o0) | [Media Space] (https://mediaspace.illinois.edu/media/t/1_h5gkzq88) | [2.2] (files/lectures/lec2-2.html) |
| 2.3 Lab 02 | | | [lab02] (lab02.html) |
| 2.4 Tuple | [YouTube] (https://youtu.be/TeolHyDlh4E) | [Media Space] (https://mediaspace.illinois.edu/media/t/1_zm45y3uj) | [2.4] (files/lectures/lec2-4.html) |

## Deadlines

| Assignment | Deadline | Credit |
|---|---|---|
| Lab 1 | 11:59 PM Wed, 09/02/2020 | 100% |
| HW 1 | 11:59 PM Sun, 09/06/2020 | 105% |

# Week 3 | 09/07/2020 - 09/13/2020

## Lectures

| Topics | Video | Mirror | Notes |
|---|---|---|---|
| 3.1 List | [YouTube] (https://youtu.be/QFIX3ZyFTrA) | [Media Space] (https://mediaspace.illinois.edu/media/t/1_bgijizya) | [3.1] (files/lectures/lec3-1.html) |
| 3.2 Dictionary | [YouTube] (https://youtu.be/TAve5Tr3aKE) | [Media Space] (https://mediaspace.illinois.edu/media/t/1_tgb00owk) | [3.2] (files/lectures/lec3-2.html) |
| 3.3 Lab 03 | | | [lab03] (lab03.html) |
| 3.4 Function | [YouTube] (https://youtu.be/bi_VnLXyhWQ) | [Media Space] (https://mediaspace.illinois.edu/media/t/1_vbndfvhl) | [3.4] (files/lectures/lec3-4.html) |

## Deadlines

| Assignment | Deadline | Credit |
|---|---|---|
| Lab 2 | 11:59 PM Wed, 09/09/2020 | 100% |
| HW 1 | 11:59 PM Fri, 09/11/2020 | 100% |
| | 11:59 PM Sun, 09/13/2020 | 80% |

# Week 4 | 09/14/2020 - 09/20/2020

## Lectures

| Topics | Video | Mirror | Notes |
|---|---|---|---|
| 4.1 Errors & Exception Handling | [YouTube] (https://youtu.be/mAQPpRhNQfQ) | [Media Space] (https://mediaspace.illinois.edu/media/t/1_g1k52q7c) | [4.1] (files/lectures/lec4-1.html) |
| 4.2 NumPy Basics: Part 1 | [YouTube] (https://youtu.be/JsXR2ELwSpQ) | [Media Space] (https://mediaspace.illinois.edu/media/t/1_lubx0uyu) | [4.2] (files/lectures/lec4-2.html) |
| 4.3 NumPy Basics: Part 2 | [YouTube] (https://youtu.be/o0kAFCEe-J0) | [Media Space] (https://mediaspace.illinois.edu/media/t/1_wirqwznz) | [4.3] (files/lectures/lec4-3.html) |
| 4.4 Lab 04 | | | [lab04] (lab04.html) |

## Deadlines

| Assignment | Deadline | Credit |
|---|---|---|
| Lab 3 | 11:59 PM Wed, 09/16/2020 | 100% |
| HW 2 | 11:59 PM **Tue, 09/15/2020** | **105%** |
| | 11:59 PM Fri, 09/18/2020 | 100% |
| | 11:59 PM Sun, 09/20/2020 | 80% |
| HW 3 | 11:59 PM Sun, 09/20/2020 | 105% |

# Week 5 | 09/21/2020 - 09/27/2020

## Lectures

| Topic | Video | Mirror | Notes |
|---|---|---|---|
| 5.1 NumPy: Linear Algebra | [YouTube] (https://youtu.be/H_E3jBpOAIQ) | [Media Space] (https://mediaspace.illinois.edu/media/t/1_7n80js47) | [5.1] (files/lectures/lec5-1.html) |
| 5.2 NumPy: Mathematical & Statistical Methods | [YouTube] (https://youtu.be/AZDZOinnOBQ) | [Media Space] (https://mediaspace.illinois.edu/media/t/1_nv1w84tc) | [5.2] (files/lectures/lec5-2.html) |
| 5.3 NumPy Application: Random Walks | [YouTube] (https://youtu.be/eE9gSVQQ5FY) | [Media Space] (https://mediaspace.illinois.edu/media/t/1_kxgicplv) | [5.3] (files/lectures/lec5-3.html) |
| 5.4 Lab 05 | | | [lab05] (lab05.html) |

## Deadlines

| Assignment | Deadline | Credit |
|---|---|---|
| Lab 4 | 11:59 PM Wed, 09/23/2020 | 100% |
| HW 3 | 11:59 PM Fri, 09/25/2020 | 100% |
| | 11:59 PM Sun, 09/27/2020 | 80% |

# Week 6 | Current Week

- Dates: 09/28/2020 - 10/04/2020

## Lectures

| Topic | Video | Mirror | Notes |
|---|---|---|---|
| 6.1 Intro to Git & GitHub | [YouTube] | [Media Space] | [6.1] |
| 6.2 Git Branches | [YouTube] | [Media Space] | [6.2] |
| 6.3 pandas Series | [YouTube] | [Media Space] | [6.3] |

## Deadlines

| Assignment | Deadline | Credit |
|---|---|---|
| Exam 1 (exam.html) | Thur, 10/01/2020 | 100% |
| Lab 05 | 11:59 PM Wed, 09/30/2020 | 100% |
| HW 4 | 11:59 PM Tue, 09/29/2020 | 105% |
| | 11:59 PM Fri, 10/02/2020 | 100% |
| | 11:59 PM Sun, 10/04/2020 | 80% |

# Week 7 | 10/05/2020 - 10/11/2020

- **Lectures**:
  - DataFrame
  - Modifying DataFrame
  - Summarizing & Computing Descriptive Statistics
- **Lab**: [lab06] ()
- **Deadlines**:
  - HW 5 105%: by 11:59 PM on Sunday, 10/11/2020.

# Week 8 | 10/12/2020 - 10/18/2020

- **Lectures**:
  - Writing Data
  - Handling Missing Data
  - Data Transformation
- **Lab**: [lab07] ()

- **Deadlines**:
    - Lab 6: by 11:59 PM on Wednesday, 10/14/2020.
    - HW 5 100%: by 11:59 PM on Friday, 10/16/2020.
        - HW 5 80%: by 11:59 PM on Sunday, 10/18/2020.
    - HW 6 105%: by 11:59 PM on Sunday, 10/18/2020.

# Week 9 | 10/19/2020 - 10/25/2020

- **Lectures**:
    - String Manipulation
    - Regular Expressions
    - Vectorized String Functions in pandas
- **Lab**: [lab08] ()
- **Deadlines**:
    - Lab 7: by 11:59 PM on Wednesday, 10/21/2020.
    - HW 6 100%: by 11:59 PM on Friday, 10/23/2020.
        - HW 6 80%: by 11:59 PM on Sunday, 10/25/2020.
    - HW 7 105%: by 11:59 PM on Sunday, 10/25/2020.

# Week 10 | 10/26/2020 - 11/01/2020

- **Lectures**:
    - GroupBy Mechanics
    - Data Aggregation
    - Apply: General split-apply-combine
- **Lab**: [lab09] ()
- **Deadlines**:
    - Lab 8: by 11:59 PM on Wednesday, 10/28/2020.
    - HW 7 100%: by 11:59 PM on Friday, 10/30/2020.
        - HW 7 80%: by 11:59 PM on Sunday, 11/01/2020.
    - HW 8 105%: by 11:59 PM on Sunday, 11/01/2020.

# Week 11 | 11/02/2020 - 11/08/2020

- **Lectures**:
    - Basics of Plotting
- **Lab**: [lab10] ()
- **Deadlines**:
    - Lab 9: by 11:59 PM on Wednesday, 11/04/2020.
    - HW 8 100%: by 11:59 PM on Friday, 11/06/2020.
        - HW 8 80%: by 11:59 PM on Sunday, 11/08/2020.
    - HW 9 105%: by 11:59 PM on Sunday, 11/08/2020.

# Week 12 | 11/09/2020 - 11/15/2020

- **Lectures**:
    - Plotting with pandas & seaborn
    - Intro to Plotly
    - Plotting for Network Data
- **No lab due to Exam 2**
- **Deadlines**:
    - **Exam 2 at TBD on Thursday, 11/12/2020**.

- Lab 10: by 11:59 PM on Wednesday, 11/11/2020.
- HW 9 100%: by 11:59 PM on Friday, 11/13/2020.
  - HW 9 80%: by 11:59 PM on Sunday, 11/15/2020.

# Week 13 │ 11/16/2020 - 11/22/2020

- **Lectures**:
  - Data Analysis Examples in Python
- **Lab**: [lab11] ()
- **Deadlines**:
  - HW 10 105%: by 11:59 PM on Sunday, 11/22/2020.

# Week 14 │ 11/23/2020 - 11/29/2020

- *No class - Thanksgiving Week*

# Week 15 │ 11/30/2020 - 12/06/2020

- **Lectures**:
  - Data Analysis Examples in Python
- **Lab**: [lab12] ()
- **Deadlines**:
  - Lab 11: by 11:59 PM on Wednesday, 12/02/2020.
  - HW 10 100%: by 11:59 PM on Friday, 12/04/2020.
    - HW 10 80%: by 11:59 PM on Sunday, 12/06/2020.

# Week 16 │ 12/07/2020 - 12/13/2020

- **Lectures**:
  - Data Analysis Examples in Python
- **Deadlines**:
  - Lab 12: by 11:59 PM on Wednesday, 12/09/2020.
  - **Final Project due at TBD on TBD**.

# REMEMBER!

When in doubt, post your question on Piazza (piazza.com/illinois/fall2020/stat430hn) or email me at hknguyen@illinois.edu (mailto:hknguyen@illinois.edu)! Don't wait!