STAT107 Data Science Discovery

Lab: Birthday

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Collaboration

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- Please work in a group of 2–4 students
  - collaboration is important in data science!
  - meet new friends and discuss :)
  - let us know if you have any questions

Practical experience of the day

1. Debugging via printing variables
2. Searching documentation via library + what you want to do
3. Searching general solution via language + what you want to do

Feedback on feedback

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- Average rating
  - AYC: 3.9 (11 responses)
  - AYH: 4.8 (6 responses)
- Lab components
  - most parts will be kept
  - comment on previous lab (7 responses) will be partly replaced by practical experience sharing (11 responses)
  - AYH students can now select their breakout rooms (thanks for the suggestion!)
  - test review/homework help cannot be done in lab due to time limitation. I will see if I can host a review session in the weekend before the test
- Other opinions
  - quick explanation about my tips and why they work: good idea! I will try to do that

Feedback on feedback

- Other opinions
  - more conversation/more engagement/hard to work in groups: I am sorry that this is my first time to teach lab sessions. Let me try to follow some of your suggestions
  - show examples of code: I will do that for your lab_simulation next week. I will also suggest the other TAs to do so but they may have their own preference
  - actual teaching of python code in lectures: I believe there is code in lectures. To learn programming (as a beginner), you need to practice instead of simply watching videos
  - appreciate all the help the TAs and CAs do: thank you :)
  - enjoy the open ended aspects of lab: I will let the other TAs know :P
  - get almost all of the class time to work on the lab: there is a dilemma :(Let's try to find a good balance

Today's lab: Birthday

- Main page (see next page if there is a connection problem)
- Retrieve the lab using git
- Complete the notebook
  - hint for 1.1: read the maths in Puzzle 1.2 if you have no idea
  - hint for 1.3 & 2.2: use `.plot.line(...)`. Check the hints in Puzzle 1.3 for the parameters `...`, which are (mostly) the axes that you want to plot
  - hint for 2.1: read birthday problem on Wikipedia if you have no idea
  - typo in 3.2: instead of "exactly 2000", you should compute "2000 or fewer"; see the test case below
  - hint for 4.4: any reasonable estimate is fine. You can check with Puzzle 4.5
- Submit your work. Feel free to:
  - ask us questions
  - leave whenever you finish the lab

Connection problem

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- Downloading the lab if the server is still down:
  - Go to https://go.illinois.edu/lab_birthday (or here)
  - Click download in the top-right corner
  - Create a new folder *lab_birthday* in your stat107/netid directory
  - UNZIP the file and copy BOTH birthday.py and lab_birthday.ipynb into the new folder *lab_birthday* (you need BOTH files)
  - Once you that set up, you're good to go!

Checking completion

Default total number of cells: 67

- 0.1 in cell 4
- 0.2 in cell 6
- 1.1 in cell 9, 11, 13
- 1.2 in cell 16, 18
- 1.3 in cell 20, 22
- 1.4 in cell 24 (reflection)
- 2.1 in cell 28, 31, 34
- 2.2 in cell 38, 40
- 2.3 in cell 42 (reflection)
- 3.1 in cell 45, 47
- 3.2 in cell 49, 50
- 3.3 in cell 52
- 4.1 in cell 56
- 4.2 in cell 58
- 4.3 in cell 60
- 4.4 in cell 61 (textual)
- 4.5 in cell 63, 64