

PoCoS - Unit 02 Python Grande

Edited by Mr. Schlenker

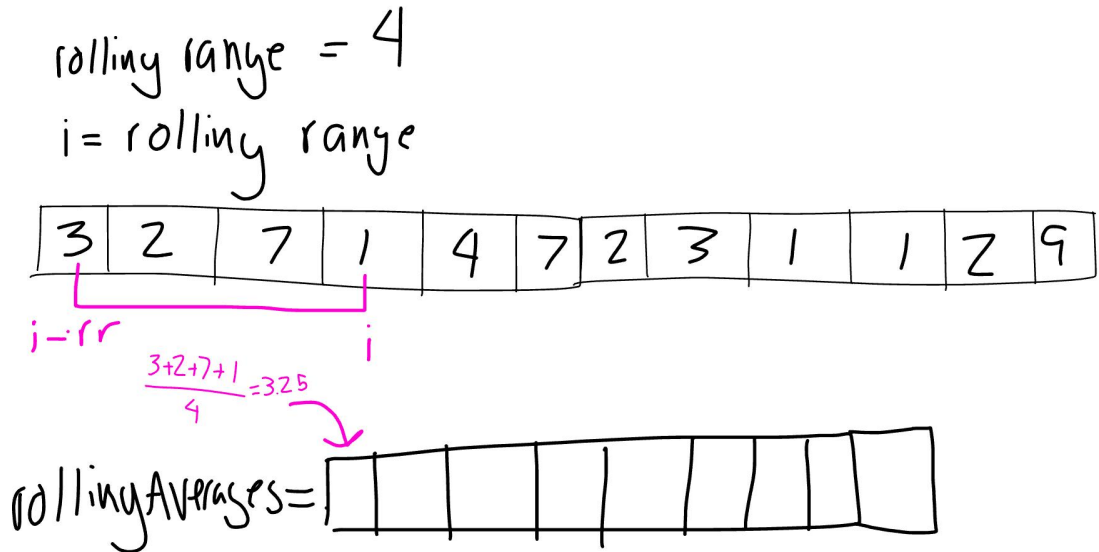
1. Create a new VSC file and name it "politicalPolling.py"
2. Copy-paste the following **data** into the file:

mocrats = [38.0, 46.0, 48.0, 48.0, 45.0, 48.0, 50.0, 47.0, 48.0, 41.0, 42.9, 48.0, 44.0, 45.47, 45.6, 36.0, 48.0, 46.3, 48.0, 45.0, 48.0, 48.0, 41.0, 48.0, 46.0, 47.0,
42.5, 50.5, 48.0, 48.0, 43.0, 44.8, 48.0, 46.0, 50.0, 33.0, 49.0, 44.7, 47.0, 44.4, 49.0, 45.0, 49.0, 46.0, 48.0, 49.0, 49.0, 46.0, 44.8, 44.0, 49.0, 37.0, 45.6, 48.0,
43.7, 46.0, 38.0, 45.0, 43.0, 48.0, 49.0, 47.0, 48.0, 45.0, 44.0, 45.0, 46.0, 48.0, 39.3, 45.6, 45.0, 48.0, 47.0, 42.0, 44.0, 45.2, 47.0, 46.0, 46.0, 34.0, 48.0, 45.5,
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45.0, 48.0, 48.0, 41.0, 45.9, 42.2, 48.0, 48.0, 51.0, 48.0, 44.0, 42.0, 36.0, 48.0, 46.0, 47.0, 44.2, 45.0, 39.0, 47.0, 47.0, 44.0, 48.0, 47.0, 44.7, 48.0, 48.0, 42.0,
47.0, 48.0, 46.4, 41.4, 48.0, 48.0, 46.0, 47.0, 39.0, 47.0, 48.0, 45.0, 48.0, 43.6, 48.3, 45.0, 48.0, 48.0, 44.0, 47.0, 42.0, 47.0, 43.6, 47.0, 45.0, 42.18, 47.0, 43.7,
48.0, 50.0, 48.0, 38.0, 45.0, 47.0, 47.0, 47.2, 48.0, 34.0, 48.0, 47.0, 48.0, 45.0, 41.0, 47.0, 41.6, 48.0, 45.1, 45.0, 47.0, 46.0, 48.0, 43.0, 44.0, 48.0, 40.9, 46.2,
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50.0, 49.0, 30.0, 45.0, 45.0, 46.0, 43.0, 41.7, 45.9, 46.0, 50.0, 44.0, 46.0, 41.0, 45.0, 45.0, 43.6, 45.0, 44.3, 45.0, 47.0, 45.0, 43.73, 45.0, 43.0, 44.0, 40.2, 45.0,
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43.0, 40.0, 43.0, 43.0, 40.7, 44.0, 42.0, 42.0, 43.0, 43.0, 41.9, 44.0, 43.0, 36.0, 44.0, 43.0, 43.0, 44.0, 43.0, 42.0, 43.0, 42.0, 43.0, 40.7, 43.0, 42.0, 37.8,
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[
42.0, 42.0, 43.0, 40.0, 43.0, 53.0, 43.0, 42.0, 40.96, 42.0, 38.7, 46.0, 48.0, 42.0, 41.0, 45.0, 44.0, 43.0, 40.0, 49.28, 47.1, 42.0, 46.7, 42.0, 47.0, 42.0, 50.0,
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51.0, 42.0, 49.0, 41.0, 43.0, 43.0, 53.0, 44.0, 44.0, 44.0, 44.0, 38.6, 46.0, 48.0, 44.0, 44.0, 42.0, 44.0, 44.0, 55.6, 34.7, 41.6, 43.0, 42.0, 48.0, 42.0, 42.0,
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44.0, 43.0, 42.0, 48.0, 42.0, 42.0, 39.0, 41.0, 42.0, 42.0, 41.0, 44.0, 41.0, 50.0, 42.0, 45.0, 42.0, 38.0, 42.0, 37.0, 42.0, 42.0, 42.0, 42.0, 42.0, 42.0, 40.0, 40.0,
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42.0, 37.0, 48.0, 41.0, 42.0, 44.0, 41.0, 41.0, 41.0, 41.0, 41.0, 42.0, 42.0, 36.0, 42.0, 41.0, 38.0, 41.0, 41.0, 41.0, 41.0, 41.0, 35.0, 41.0, 41.0, 41.0, 41.0,
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38.0, 41.0, 42.0, 41.0, 42.0, 41.0, 37.0, 42.0, 43.0, 41.0, 41.0, 39.0, 41.0, 41.0, 31.0, 41.0, 41.0, 41.0, 46.4, 42.0, 42.0, 41.0, 42.0, 41.0, 40.0, 40.0, 42.7, 41.0,
41.0,
41.0, 41.0, 41.0, 42.0, 41.0, 41.0, 41.0, 41.0, 31.0, 41.0, 46.0, 41.0, 41.0, 41.0, 38.0, 41.0, 41.0, 42.0, 42.0, 43.0, 41.0, 41.0, 40.0, 40.0, 41.0, 44.0, 41.0,
41.0, 41.0, 40.0, 40.0, 40.0, 41.0, 41.0, 41.0, 41.0, 41.0, 41

- c. Let's use a rolling average to find out where the lead switches

- i. First lets learn what a rolling average is by using a simple for slot moving average
- ii. For each slot take the average from the current index (which starts at the rolling average range), to the slot index - rolling average, and append this new value to the list of rolling averages



- iii. We will average the last 200 polls to smooth out the bumps and get a clearer answer
- iv. Create an empty list of the rolling averages for each party
- v. Now take what you learned and create a 200 long rolling average of the polls
- vi. Then, using the dates array, print out all the dates where both averages are the same (Note: the first average is at dates[rollingRange], not a dates[0])

Lead switches on: M1/D1/Y, M2/D2/Y, M3/D3/Y...

Dates should start indented with a tab and line up. They should be separated by commas, but make sure to not include the trailing comma

5. After you get it to work, try to **condense your code** as much as possible.
Also, make sure to follow all the **programming conventions** ([in this doc](#)).
6. Show Mr. Schlenker your code to get credit.