

# GPGN 268 – GEOPHYSICAL DATA ANALYSIS

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**Teaching Assistant:** Seunghoo Kim (she/them)  
[seunghookim@mines.edu](mailto:seunghookim@mines.edu)

- Please take a moment **now** to complete the pre-course survey on [Canvas](#).
- Go to [hackmd.io/@villasboas/GPGN268/edit](https://hackmd.io/@villasboas/GPGN268/edit) and sign up with your Mines email

# INTRODUCTIONS

- Preferred name, year, major...
- What is a research topic or career path that interest you?
- What do you hope to get out of this course?

# ABOUT ME

- Assistant Professor in Geophysics (August 22).  
But... I'm not a geophysicist! 🤔
  - BSc in physics
  - MSc and PhD in physical oceanography
- I'm interested in how ocean waves can impact the Earth's climate 🌊
- I'm excited to share with you some tools that I use *every* day! I hope to learn more about other topics in Earth sciences

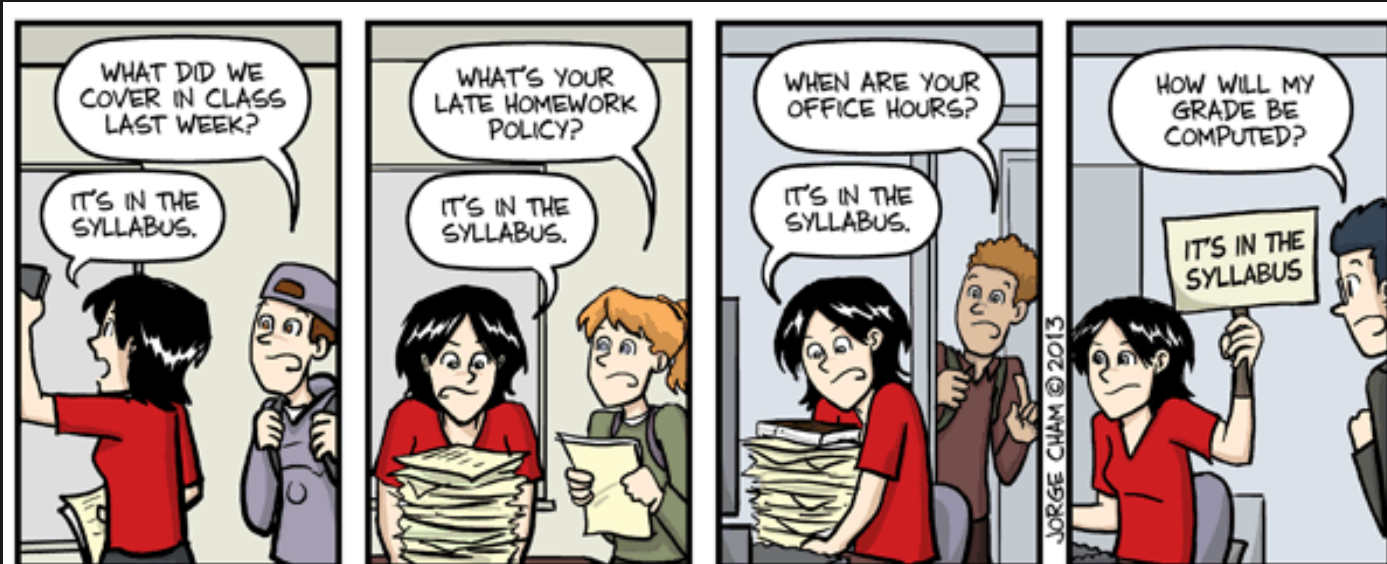
## About you:

- Preferred name, year, major...
- What is a research topic or career path that interest you?
- What do you hope to get out of this course?

## COURSE LOGISTICS

- Most of our interaction will happen on our [GitHub organization](#)
  - Syllabus + Schedule
  - Class material + Resources
  - Assignments
  - Discussions

# YOU KNOW THE DRILL



## IT'S IN THE SYLLABUS

This message brought to you by every instructor that ever lived.

[WWW.PHDCOMICS.COM](http://WWW.PHDCOMICS.COM)



# OFFICE HOURS POLL

- Bia's drop-in hours
  1. Tuesday → 11 AM-12 PM
  2. Tuesday → 12-1 PM
  3. Wednesday → 1-2 PM
  4. Wednesday → 2-3 PM
  5. Thursday → 11 AM-12 PM



## OFFICE HOURS POLL

- Seunghoo's drop-in hours
  1. Monday 10-11 AM
  2. Monday 3-4 PM
  3. Wednesday 10-11 AM
  4. Friday by appointment on Zoom





# COURSE COMMUNICATION

- Our main communication channel will be [GitHub Discussions](#)
- Drop-in hours
- Schedule an appointment
- Please only use email to clarify simple questions – Remember to include **GPGN268** in the subject line.



# GRADING POLICY

- **Class Engagement (20%)**
- **Short assignments & quizzes (20%)** – Individual  
(no collaboration)
- **Data stories (30%)** – Individual  
(collaboration/discussion welcome)
- **Final Project (30%)** – Group



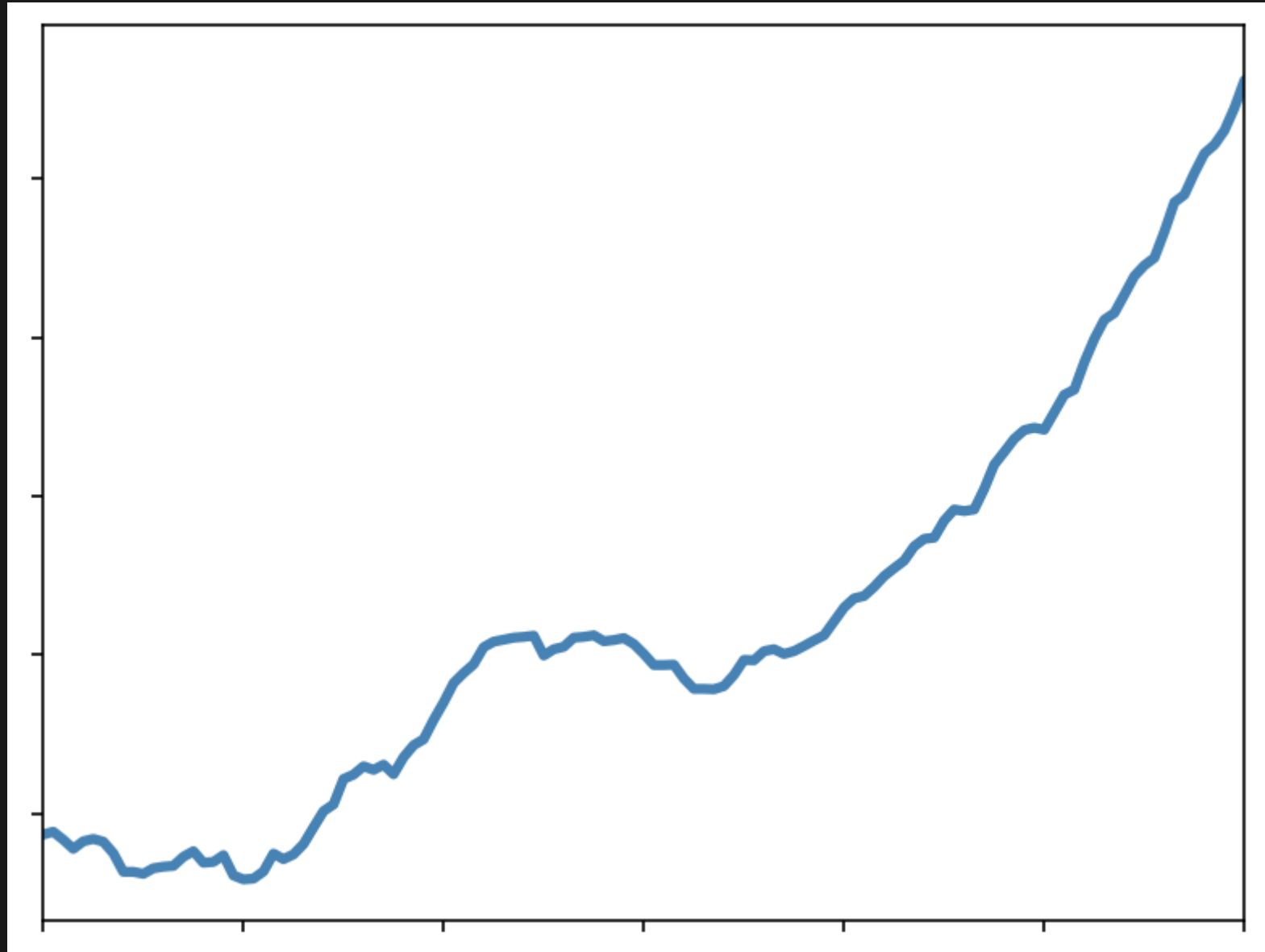
# COURSE SCHEDULE

# WHAT YOU CAN EXPECT FROM ME

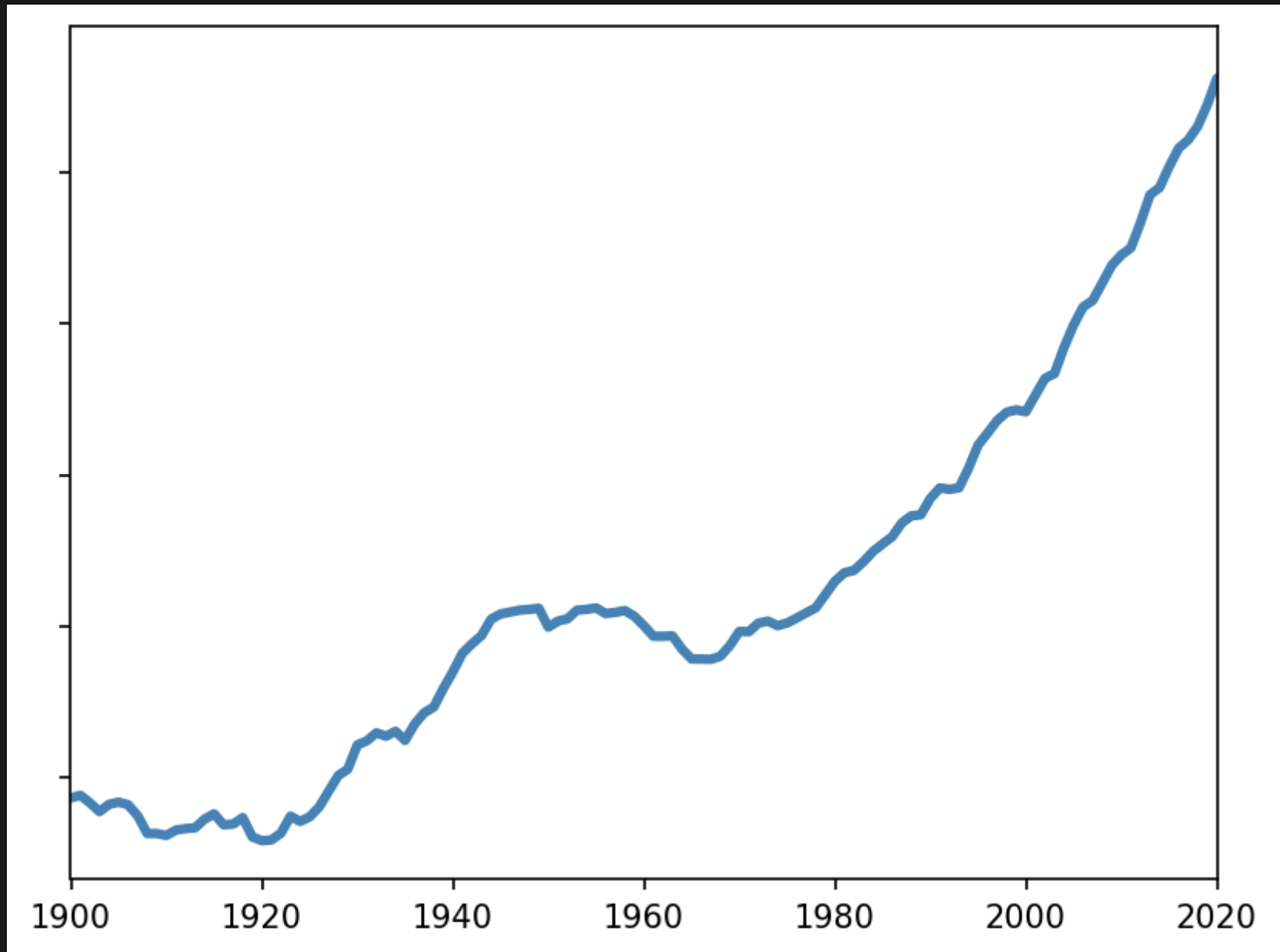
- I'm here to support you and provide a nurturing classroom environment that focuses on *your* learning
- This course may be hard, but I will work just as hard as you to make sure it is worth it.
- I will make every effort to respond quickly (< 24 hours on weekdays) to your questions, but please don't leave it until the last minute.
- I am open to feedback. I want to make this class work for *you* and your peers

# WHAT TO EXPECT FROM THIS CLASS

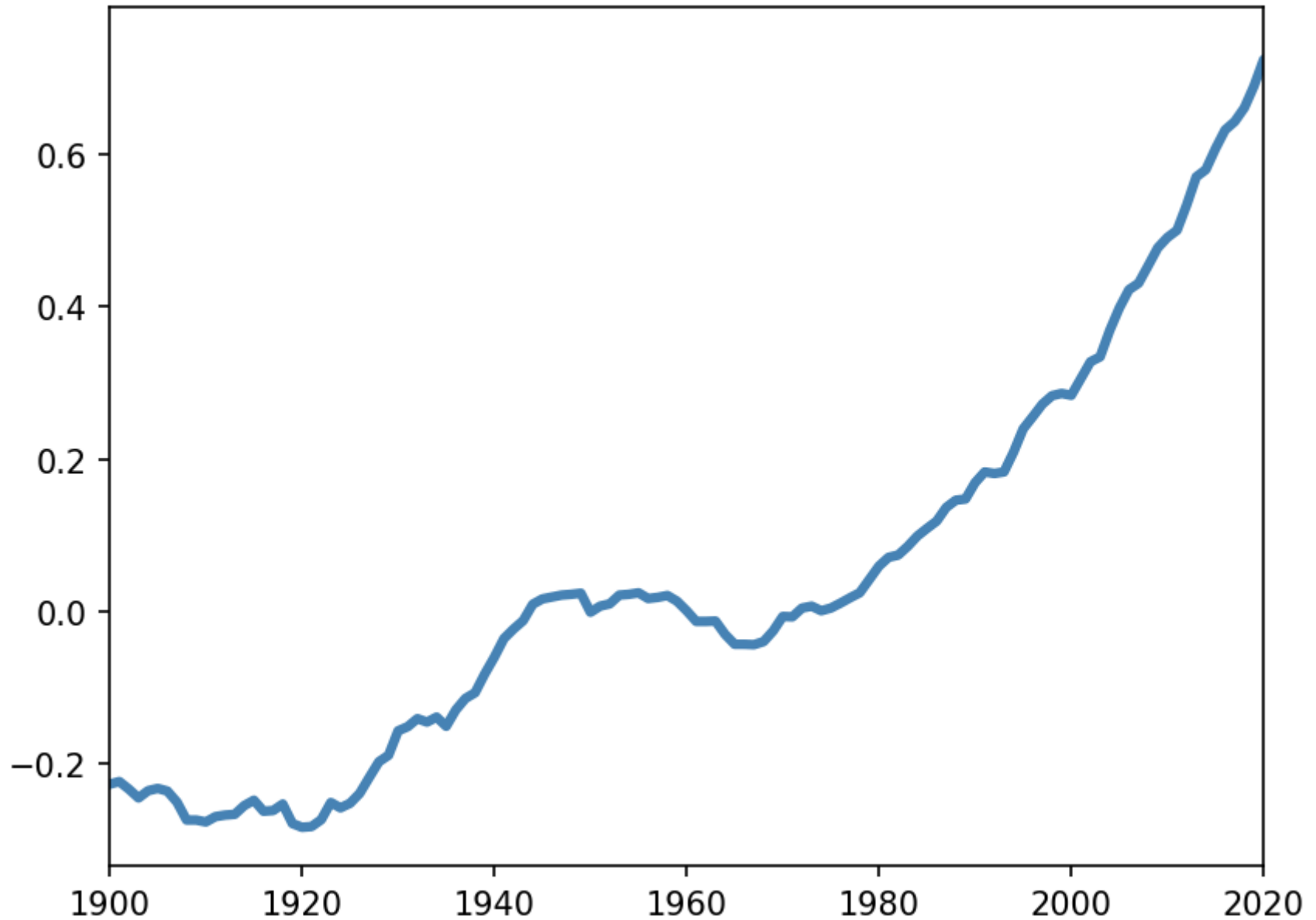
# WHAT ARE YOU LOOKING AT?



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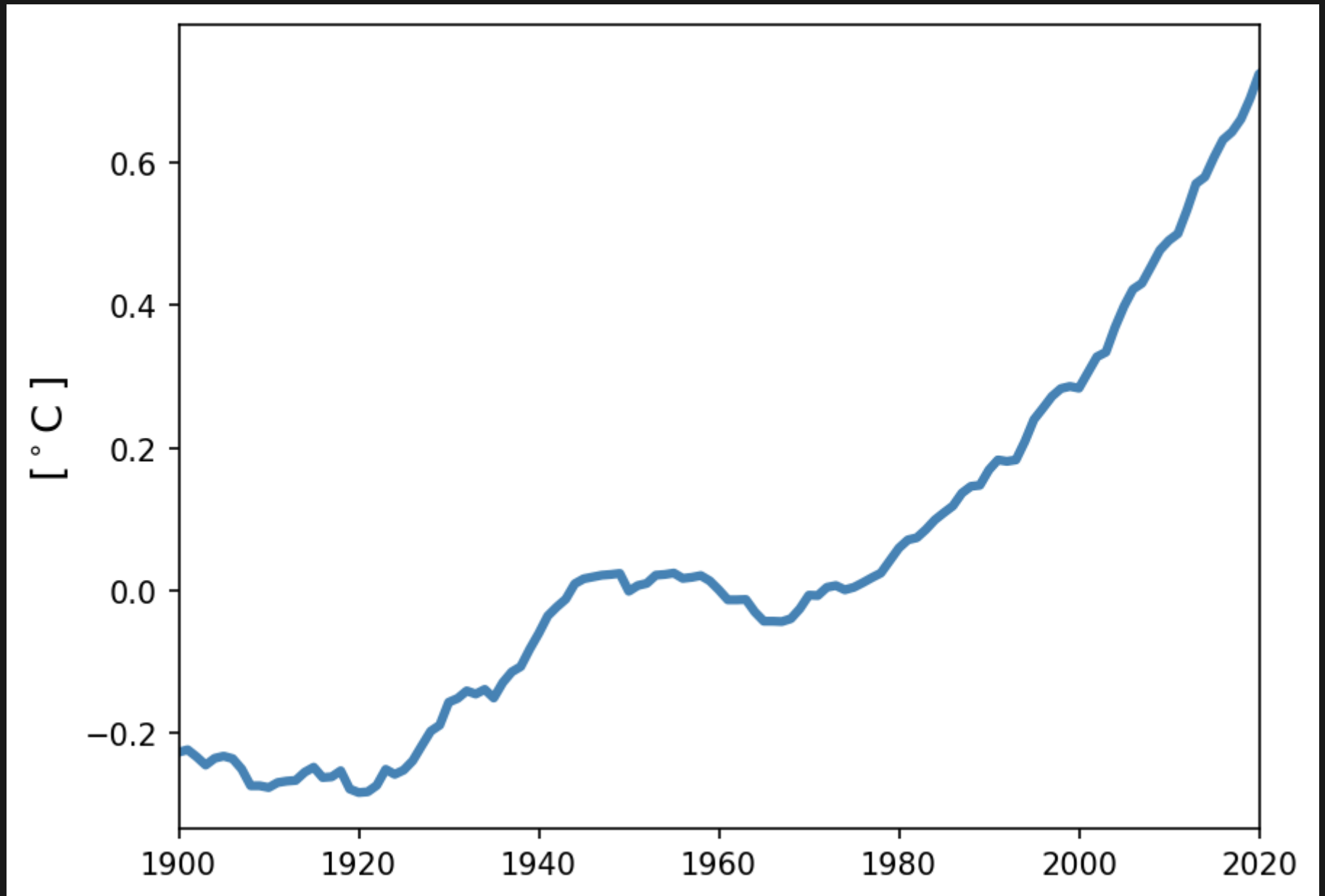


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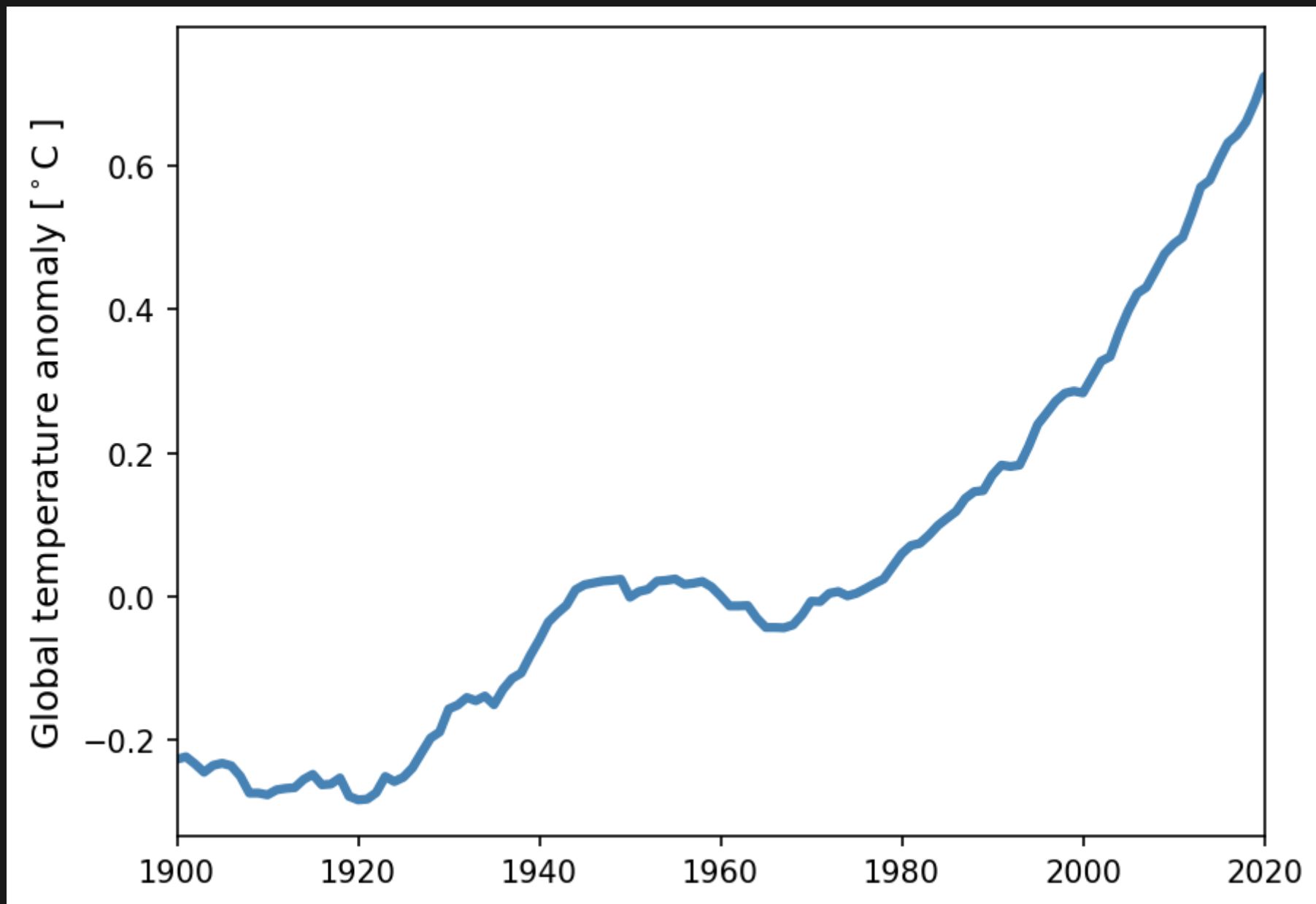




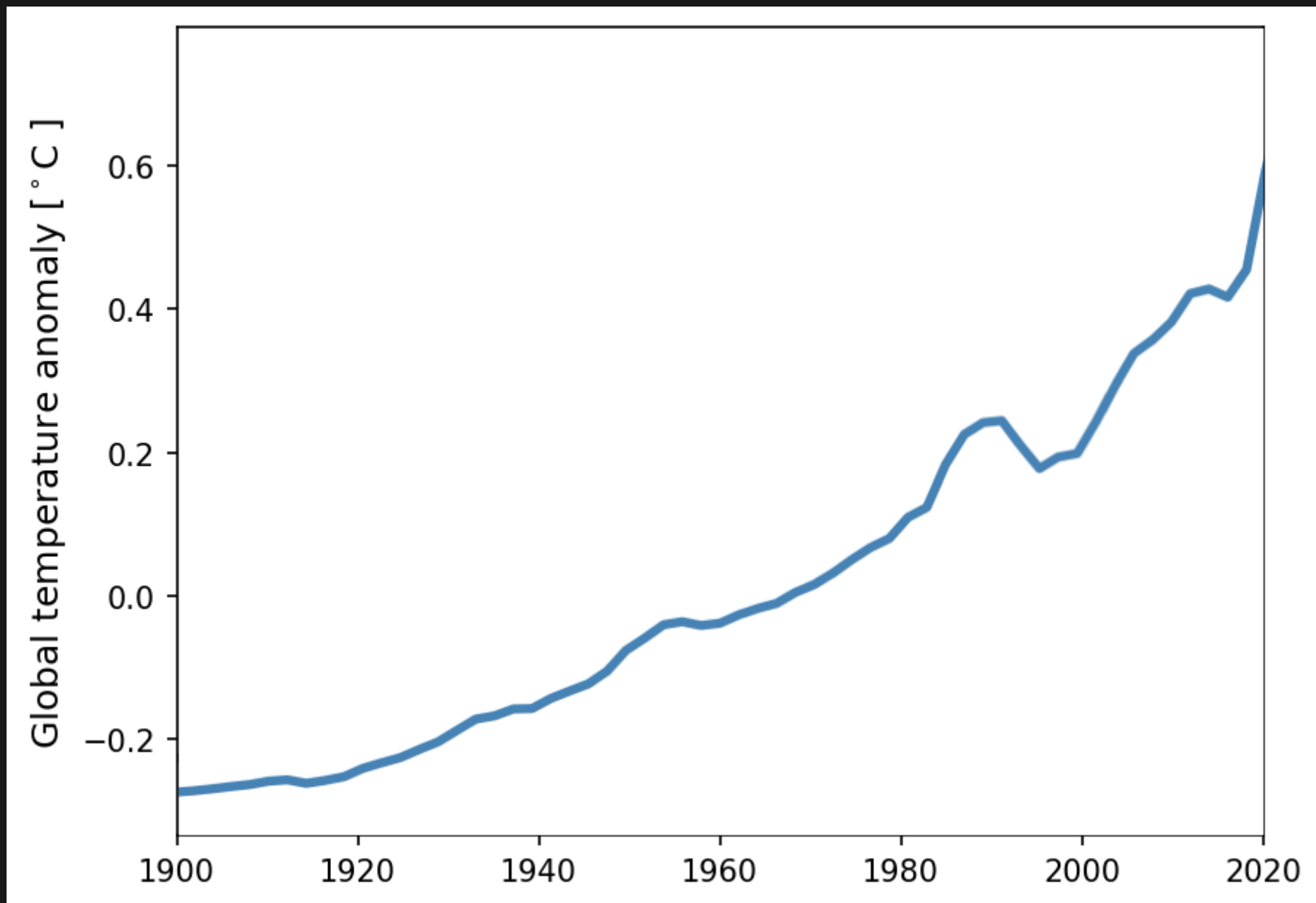
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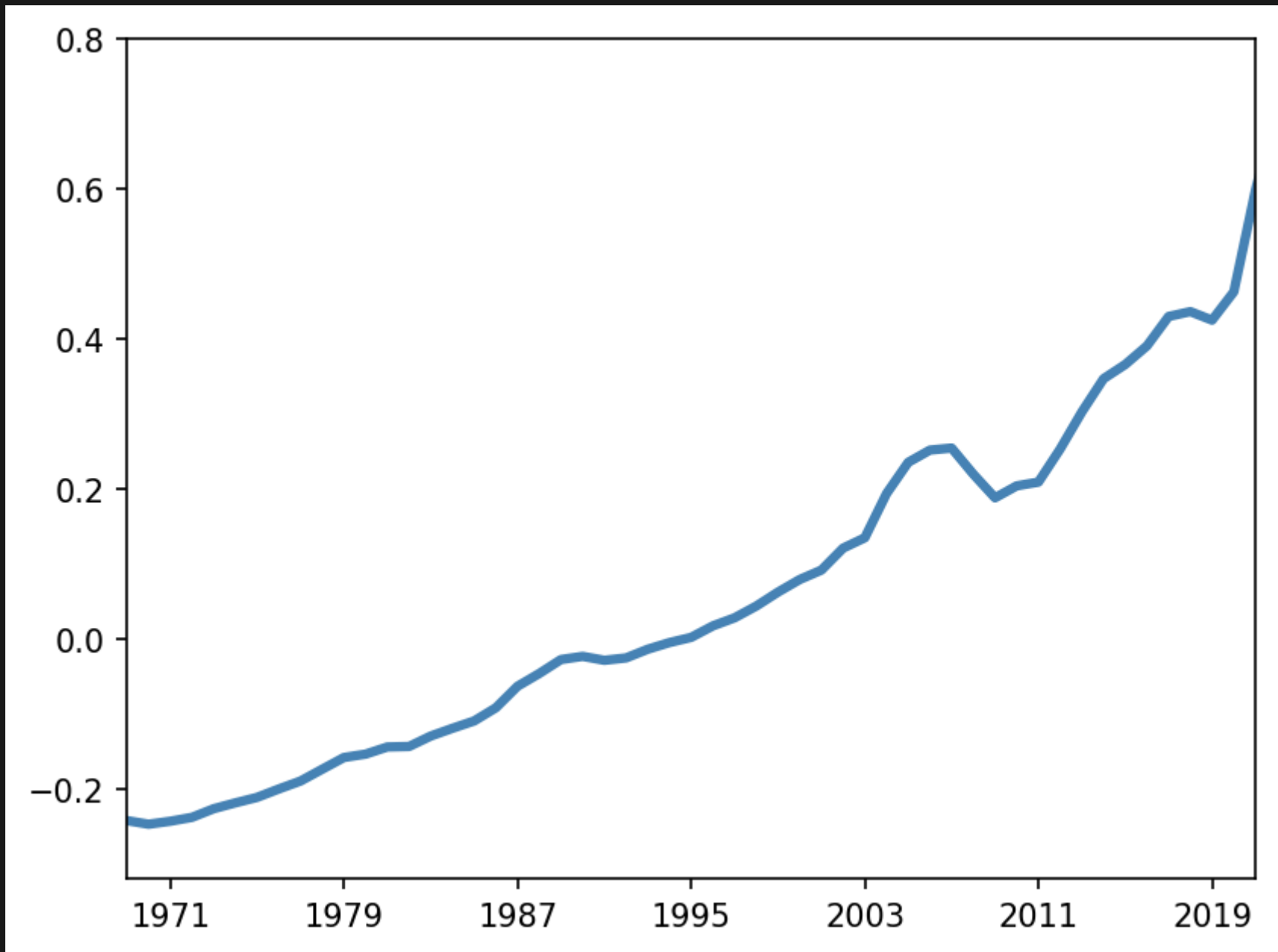
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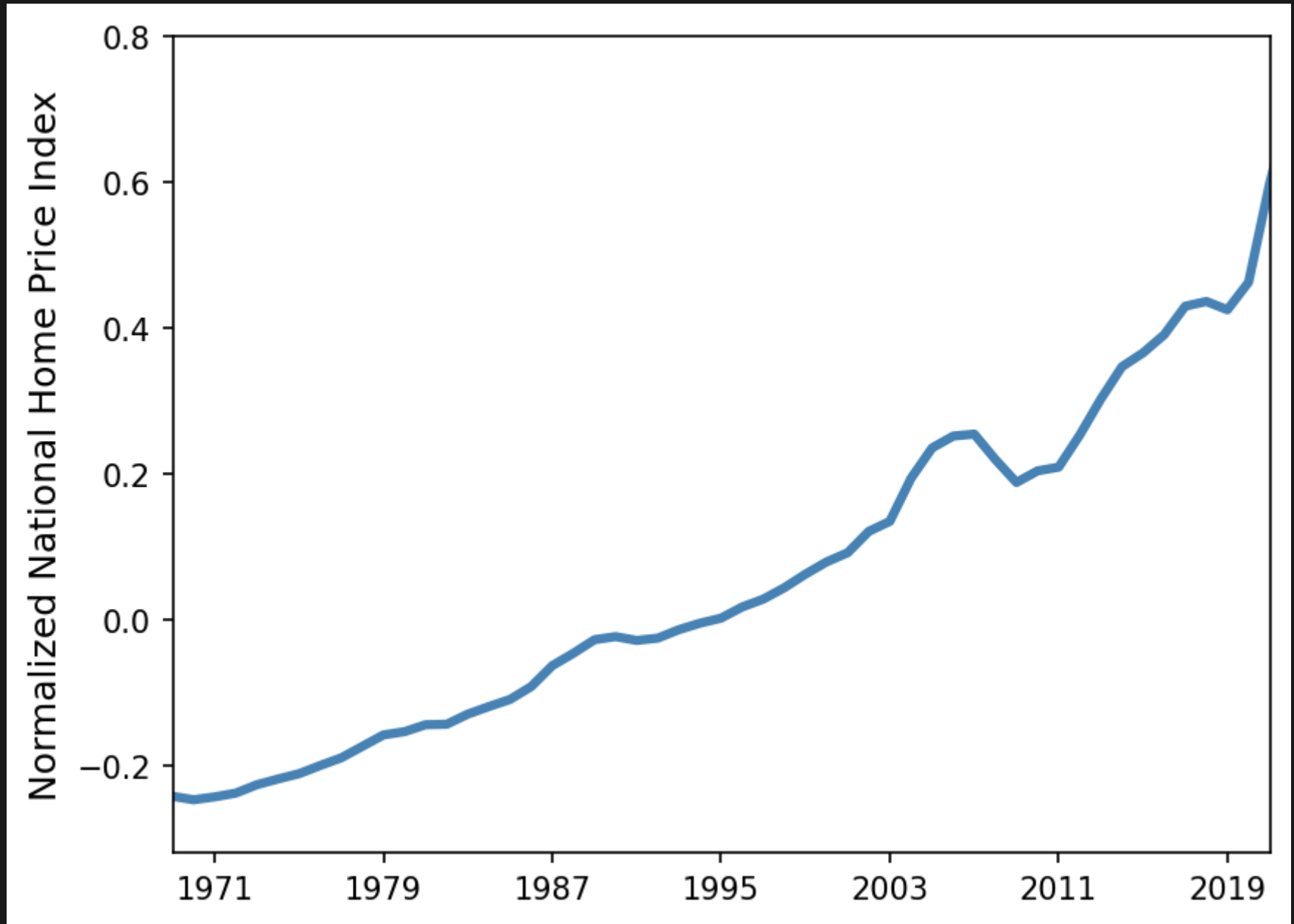
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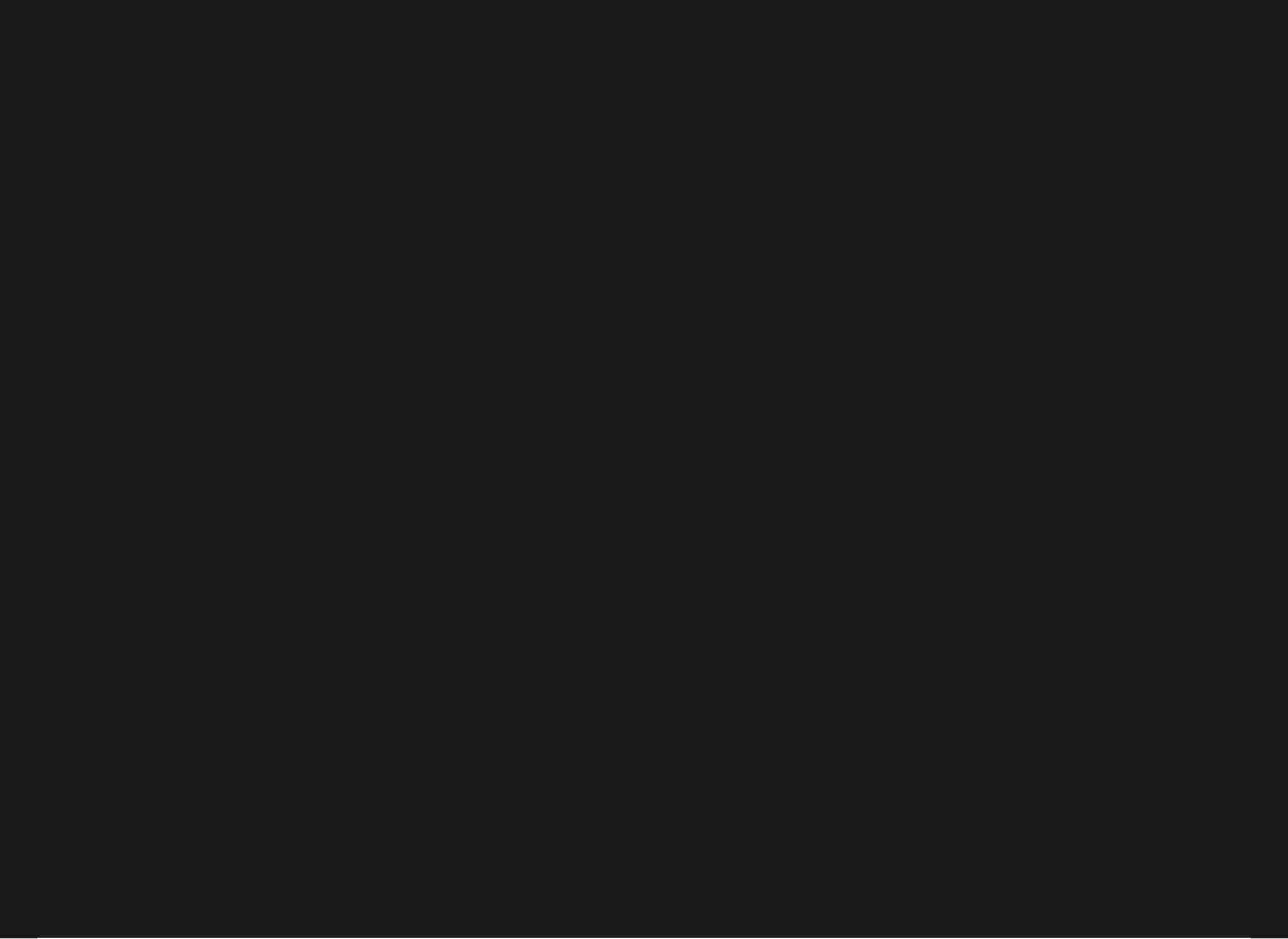


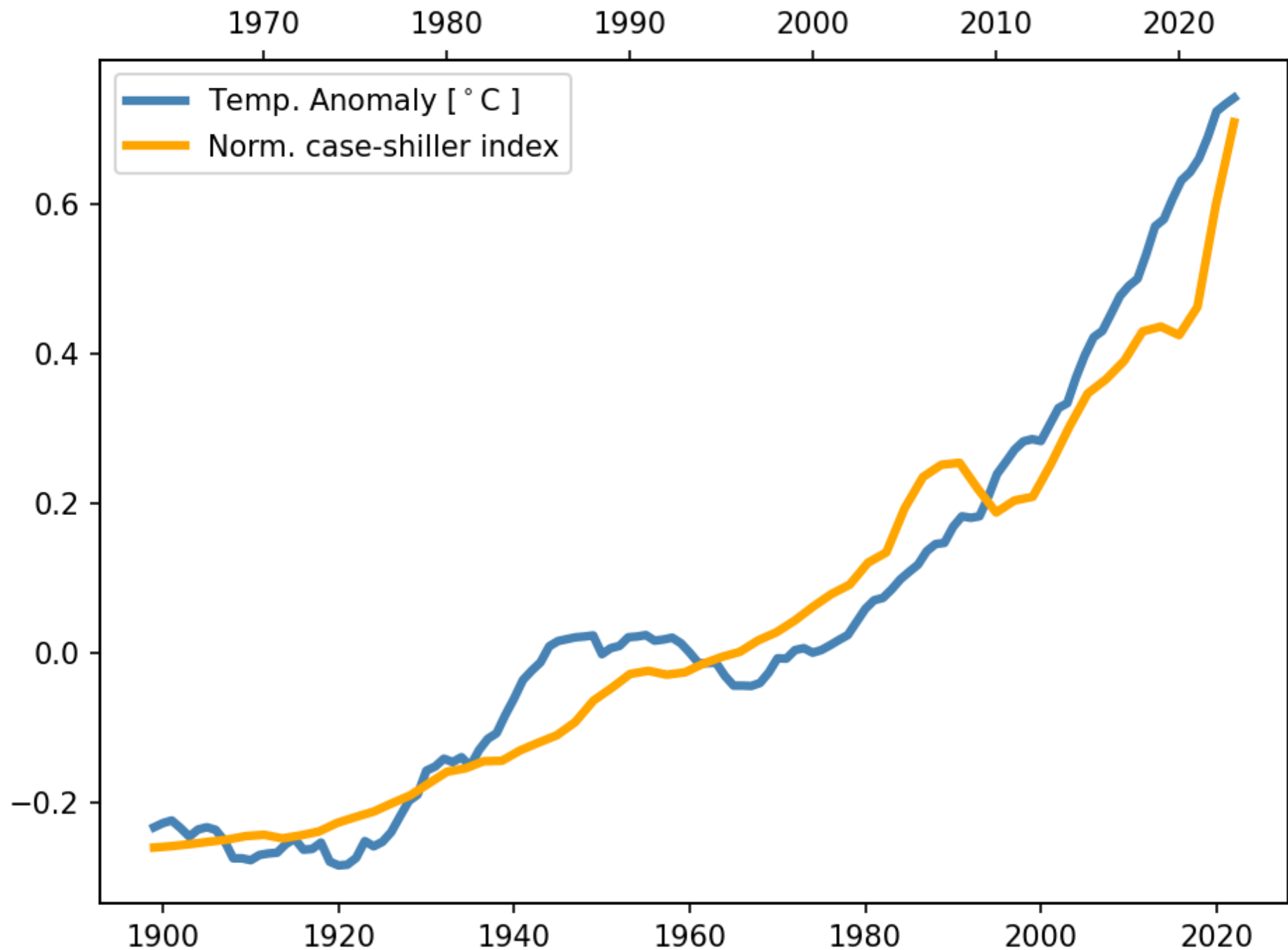
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## WHAT TO EXPECT FROM THIS CLASS

In this course, you will practice critical thinking and learn tools to help you interpret and present (geophysical) data



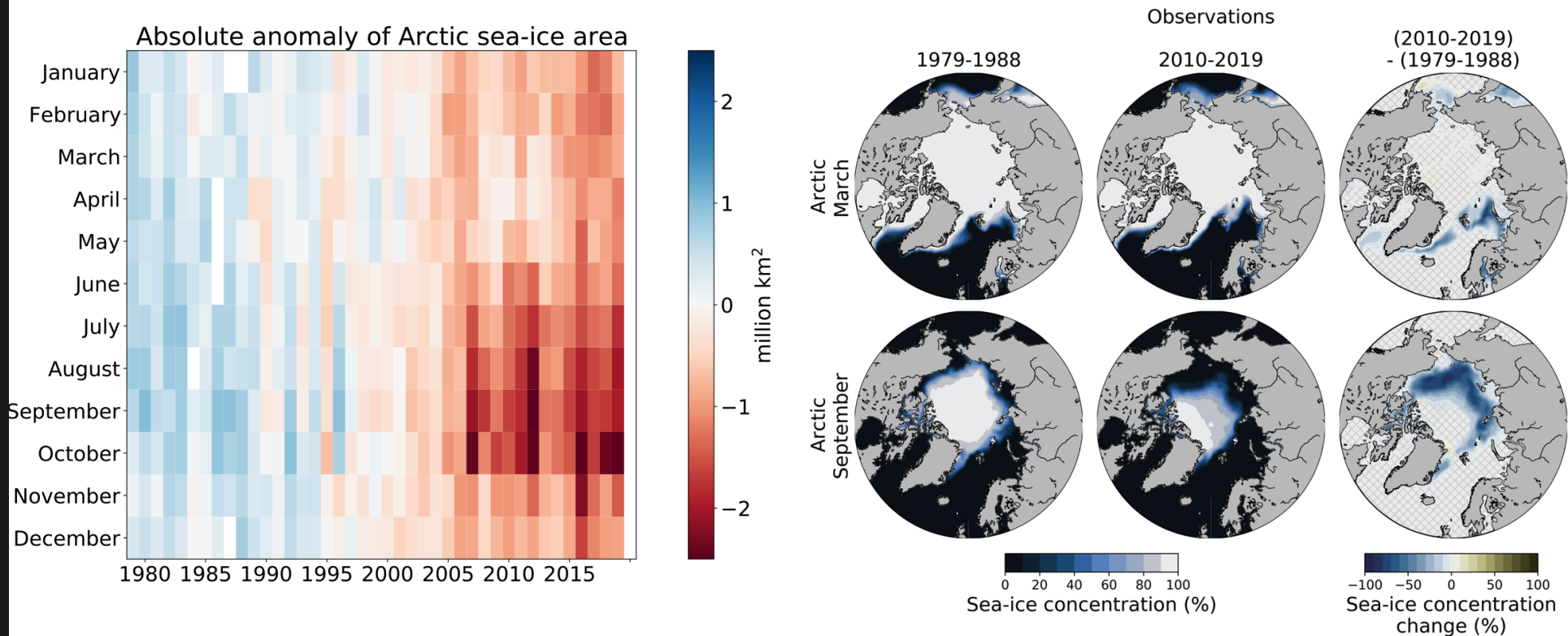
# ACTIVITY:



## Reproducible workflow brainstorm

### Arctic sea-ice historical records

Anomaly time series, maps of seasonal sea-ice concentration and changes



# BY THE END OF THE SEMESTER YOU WILL BE ABLE TO

- Find, process, visualize, analyze, and interpret multiple flavors of geophysical data;
- Use Unix commands to work with files and directories;
- Identify common geoscience data formats and the best tools to handle them;
- Construct complete, well-structured programs in Python;
- Work in teams to solve geophysical problems and collaborate on projects through GitHub
- Practice reproducible research through version control, documentation, and metadata aggregation.

## TO DO

Complete the onboarding checklist before next class

