

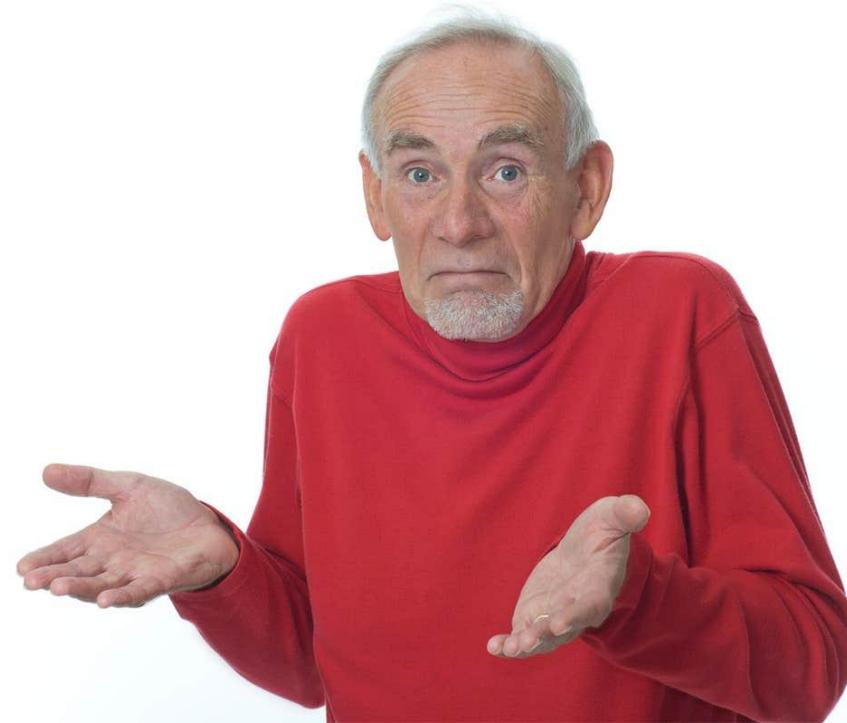
# Askin' Questions

## Software Design for Data Science

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# Asking questions



## Not asking questions:



# When to ask questions

- Trick question! Always ask questions.
- Especially for projects
- However, for questions related to homeworks:
  - Class discussion forum only (don't make a post on Stack Overflow)
  - Don't provide direct code from your homework in your questions
  - Don't provide direct code from your homework in your answers

# Who to ask questions

In order of preference:



1. Your teammates



3. Office hours



2. The class discussion board

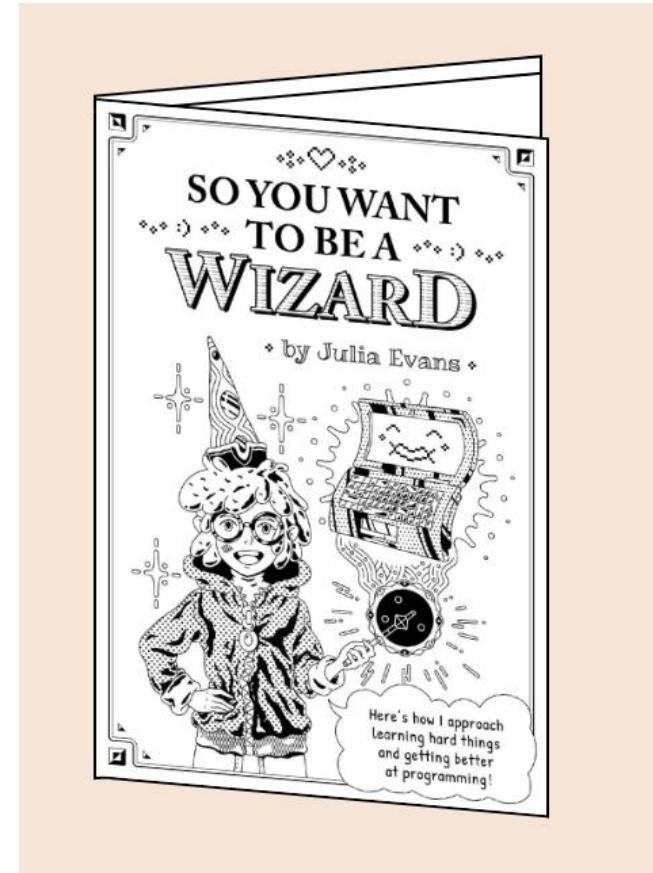


4. The internet

# Take advice from your wizards

Tech learner and teacher Julia Evans published a ~~100~~ tip-top ~~100~~ free zine about asking questions (among other difficult engineering basics):

<https://wizardzines.com/zines/wizard/>



# Asking a good question

1. Research
2. Give context
3. Be specific
4. Be clear
5. Be concise
6. Proofread
7. Follow up with answers

## 1. Research

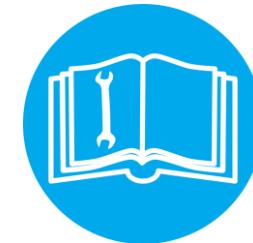
## Put in a good faith effort



## Search engine (Google, etc)



## README or FAQ



## Manual/documentation

```

584     if not headers.get('x_headers_buffer'):
585         self._headers_buffer = []
586     self._headers_buffer.append("%s %d %s\r\n" %
587         (self.protocol_version, code, message)).encode(
588             'latin-1', 'strict')
589
590     def send_header(self, keyword, value):
591         """Send a header to the headers buffer. ***  

592         self.request_version != 'HTTP/0.9':  

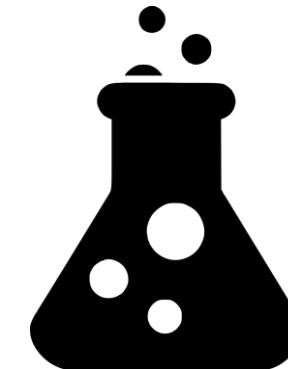
593         if not hasattr(self, '_headers_buffer'):
594             self._headers_buffer = []
595         self._headers_buffer.append("%s %s\r\n" %  

596             (keyword, value)).encode('latin-1',  

597             'strict')
598
599         if keyword.lower() == 'connection':
600             if value.lower() == 'close':
601                 self.close_connection = True
602             elif value.lower() == 'keep-alive':
603                 self.close_connection = False

```

## Source code



## Experiment with solutions

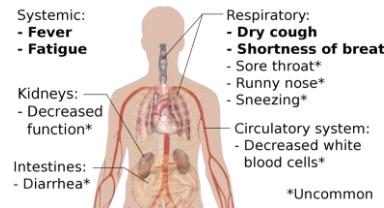
**“Timeboxing”**: set a short deadline to try on your own (like half an hour). If stuck longer than that, ask a question

## 2. Give context



## 3. Be specific

### Symptoms of COVID-19 (coronavirus disease 2019)



The symptoms - what do you expect, what is happening



Tools/environment you're using  
(including version numbers)



What you've already searched for or tried  
(and what happened)

```

584     if not bheaders(self, "headers_buffer"):
585         self._headers_buffer = []
586     self._headers_buffer.append("Content-Type\r\n")
587     (self.protocol_version, code, message)).encode(
588         "latin-1", "strict"))
589
590     def send_header(self, keyword, value):
591         """Send a HTTP header to the headers buffer."""
592         if keyword == "Connection":
593             self._headers_buffer.append("HTTP/1.1\r\n")
594         if not bheaders(self, "headers_buffer"):
595             self._headers_buffer = []
596         self._headers_buffer.append(
597             ("{}: {}{}\r\n".format(keyword, value)).encode("latin-1", "strict")))
598
599     if keyword.lower() == "connection":
600         if value.lower() == "keep-alive":
601             self.close_connection = True
602         elif value.lower() == "keep-alive":
603             self.close_connection = False
604
605

```

Relevant code\*



Any error messages\*

\* see Step 5: be concise

## 4. Be clear

### Title

Summary of the problem or **object deviation**

The thing having  
the problem

Difference between  
expectation and reality

Context context context context context context context  
context context context context context context context  
context context context context context context context.  
**Clear question in  
question words with a question mark at the end?** Other stuff  
including code samples or things you've tried

**Bold question  
(NOT open-ended)**

Bad title: Why doesn't this work? Please help!

Good title: Jupyter notebook crashes on startup

## 5. Be concise

- Text not images - no screenshots!
  - Unless you're asking about interface or graphical/chart-related issues
  - Format code if possible - use "code" under Format in Canvas or ``` in Markdown
- Don't just copy in your entire program/data/error message! Sample, simplify

**BAD:** Here's all my data:

431,10/13/2014 10:31:00 AM,10/13/2014 10:48:00 AM,SEA00298,985.935,2nd Ave & Spring St,Occidental Park / Occidental Ave S & S Washington St,CBD-06,PS-04,Member,Male,1960  
432,10/13/2014 10:32:00 AM,10/13/2014 10:48:00 AM,SEA00195,926.375,2nd Ave & Spring St,Occidental Park / Occidental Ave S & S Washington St,CBD-06,PS-04,Member,Male,1970  
433,10/13/2014 10:33:00 AM,10/13/2014 10:48:00 AM,SEA00486,883.831,2nd Ave & Spring St,Occidental Park / Occidental Ave S & S Washington St,CBD-06,PS-04,Member,Female,1988  
434,10/13/2014 10:34:00 AM,10/13/2014 10:48:00 AM,SEA00333,865.937,2nd Ave & Spring St,Occidental Park / Occidental Ave S & S Washington St,CBD-06,PS-04,Member,Female,1977  
435,10/13/2014 10:34:00 AM,10/13/2014 10:49:00 AM,SEA00202,923.923,2nd Ave & Spring St,Occidental Park / Occidental Ave S & S Washington St,CBD-06,PS-04,Member,Male,1971  
436,10/13/2014 10:34:00 AM,10/13/2014 10:47:00 AM,SEA00337,808.805,2nd Ave & Spring St,Occidental Park / Occidental Ave S & S Washington St,CBD-06,PS-04,Member,Male,1974  
**...1000 more lines**

**BETTER:** A sample row in my data looks like:

431,10/13/2014 10:31:00 AM,10/13/2014 10:48:00 AM,SEA00298,985.935,2nd Ave & Spring St,Occidental Park / Occidental Ave S & S Washington St,CBD-06,PS-04,Member,Male,1960

## 6. Proofread



Clear?

Concise?

Specific?

Enough context?



“Rubber ducking”

## 7. Follow up with answers

If an answer given doesn't work, post a comment:

- What your updated code looks like
- The new error message
- Anything else you were inspired to try since you posted your question

If a proposed solution does work:

- Respond so others with the same problem will know that the solution worked
- Thank the person for helping you!

Also helpful - ask how the person figured it out, or how you could figure it out on your own next time

# Whoops! I asked a bad question

- It's ok! We all do it
- But you'll get far better answers with good questions
- Keep practicing!

## Example 1

**Foo Bar library help**

Where can I find out stuff about the Foo Bar library?

**BETTER: How to find Foo Bar library information?**

I used Google to try to find the “Foo Bar” library, but I got no useful hits. Can I get a pointer to programming information on this library?

# Example 2

## Homework 2 debugging

Can anyone help me figure out why my Python code for Homework 2 doesn't work? Here's my code:

```
504         if not hasattr(self, '_headers_buffer'):
505             self._headers_buffer = []
506             self._headers_buffer.append((b"\r\n\r\n" + 
507                 (self.protocol_version, code, message)).encode(
508                     'latin-1', 'strict'))
509
510     def send_header(self, keyword, value):
511         """Send a HTTP header to the headers buffer."""
512         if self.request_version == "HTTP/0.9":
513             if not hasattr(self, '_headers_buffer'):
514                 self._headers_buffer = []
515             self._headers_buffer.append(
516                 (b": " + keyword + "\r\n" + value)).encode('latin-1', 'strict')
517
518         if keyword.lower() == "connection":
519             if value.lower() == "close":
520                 self.close_connection = True
521             elif value.lower() == "keep-alive":
522                 self.close_connection = False
523
524
```

## BETTER: Allowing emails containing a single quote

When processing emails, I'm having trouble allowing the single quote character (') because that's the character that I use to start a string - I can't enclose a single quote in a string like ``''. Google doesn't help because it doesn't search for quotes themselves. **How do I express a single quote in Python?**

## Example 3

Can't install Jupyter notebooks

How do I install Jupyter notebooks?

BETTER: **Conda command not found when installing Jupyter notebooks**

I'm following the instructions on [the course website](#) to install Jupyter notebooks on my Windows 11 computer. I successfully installed miniconda, but when I tried to run  
`conda install jupyter notebook` I got this error message:

```
bash: conda: command not found
```

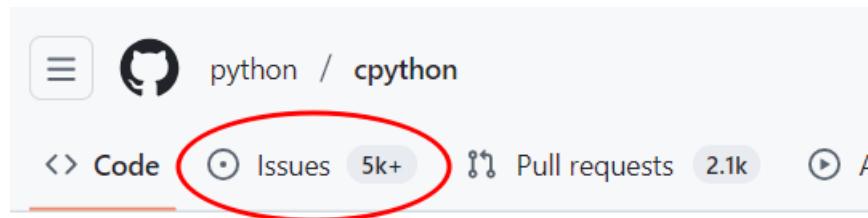
Why can't bash find conda? I already tried reinstalling miniconda.

# Challenge!

Take a look at trending open source projects on GitHub:

<https://github.com/trending>

Go to the issues tab at the top of the project page:



Find the **best question** and the **worst question** that you can. Post them in EdStem chat.

## More guidance on asking questions

[How to ask programming questions \(ProPublica\)](#)

[How do I ask a good question? \(Stack Overflow\)](#)

[How to ask good questions \(Julia Evans\)](#)

[Rubber duck debugging \(Wikipedia\)](#)