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CHAPTER 6

Getting Help

Learning Objectives

- *List and describe the different ways you can use help on a project*
- *List and describe the actions you can take to get unstuck*
- *Demonstrate your ability to navigate and decipher the official Python documentation website*
- *Download the Python documentation for offline access*
- *List and describe high-value Python help resources found on the web*
- *List and describe the benefits of Association of Computing Machinery (ACM) membership*
- *Sign up for an account on stackoverflow.com*
- *Explain when and when not to submit a question on stackoverflow.com*
- *Explore the stackexchange.com family of websites*
- *List and describe alternative Python coding platforms*
- *Explain how to incorporate code from GitHub into your projects*
- *Demonstrate your ability to use Google dorks to refine search criteria*
- *Explain how to use ChatGPT, Claude, and Grok to assist with coding tasks*

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INTRODUCTION

Sometimes, you just need some help. We've all been there. Everyone needs a little help now and then, especially when you're learning how to program. Even professional, seasoned programmers need help from time to time. I'd venture to say that what sets professional programmers apart from their less-experienced counterparts is their ability to quickly find answers to their pressing problems and move one. In other words, they know how to get help — good quality, high-value help.

You've heard the term “Give a man a fish and he eats for a day; Teach a man to fish and he eats for the rest of his life.” Learning how to find help seems like such a trivial notion. At first blush you might scoff and say, “Well, just search online!” But the Internet is a vast and sprawling wasteland and just throwing spaghetti on the wall will get you a bunch of spaghetti thrown back at you. Understanding the nature of your difficulty and how to focus your search goes a long way towards finding the help you need.

Like programming, building competency in finding good help takes practice. A simple Google search may yield a million or more results. Separating the wheat from the chaff is a skill no less valuable than having a firm grasp of Python syntax.

What you will discover as you seek help, both offline and online, is that the type of help you need is directly related to the type of problem(s) you're encountering. If you are completely lost you may need a tutor or a mentor. Most everyone has benefited from having someone who can show them the ropes. If you know what needs to be done but just not how to do it, then seeing a simple example will blast you unstuck like a stick of dynamite.

Also, the nature of your problems will change as you build competency and gain experience in programming. At first, as a novice, you may feel overwhelmed. As your capabilities mature, your difficulties begin to narrow in scope. You will go from needing help with everything to needing a hint here and there on how to get past a particular tricky spot.

1 YOU'RE STUCK — NOW WHAT?

It feels awful to be stuck. Personally, when I encounter a difficult problem that stumps me, I feel like I can't move on. I feel blocked. It bothers me. The type of solution required to move past an obstacle either mental or physical is dictated by the type of problem or blocker that's holding you up. These generally fall into the following categories: Completely Lost, Where To Begin?, Specific Issue, and Tooling Overload. Let's discuss each of these in more detail.

1.1 COMPLETELY LOST

When you first start learning how to program you may be absolutely overwhelmed, especially if you're not very computer savvy. Symptoms include feelings of panic, anxiety, and perhaps even depression and despair. No amount of searching online will deliver salvation. What you need is an up close and personal intervention. You need a tutor. You need someone who can sit down with you and guide you step-by-step as you write and execute your first lines of code.

Preferably, your tutor should be someone in your peer group. Someone you can relate to. You may be intimidated by your instructor, who may or may not have the time to tutor students one-on-one.

The role of a tutor is several fold. First, they should provide calming guidance and focus. They may use various techniques to set you on the path towards learning. However, they should not do the work for you. You learn nothing that way. A tutor should demonstrate and explain, and then give you the wheel and let you drive.

The primary cause of being completely lost is due to the sheer number of new and unique concepts you encounter when first learning to program, and attempting to run before you can walk. I'm sure using a lot of metaphors here but they seem appropriate. Sitting down at the computer and attempting to write a program without first having an understanding of fundamental concepts is a recipe for failure and disappointment. (See *"The Difficulties You Will Encounter"* on page 62.) Having someone there by your side to guide you will not only provide you the help you need, it will boost your confidence.

Another huge thing you can do to get past feeling completely lost is to start and maintain your engineer's notebook. (See *"The Engineer's Notebook"* on page 80.)

If you feel completely lost even after several weeks of studying, it's absolutely imperative you get past this stage as soon as possible. Repeated failure extracts a real psychological toll through a phenomenon referred to as Learned Helplessness. (*Learned Helplessness at Fifty: Insights from Neuroscience*) For the purposes of this book, being stuck at the completely lost stage for too long negatively impacts your self esteem and confidence. You may begin to believe there's something wrong with you, that you're somehow inferior or not cut out to be a programmer. You need success early and often. You need to write and execute simple programs and score some wins. You need small victories! If you encounter problems going it alone, a tutor can be a lifesaver.

1.2 WHERE TO BEGIN?

After a while, after sitting in class and feeling confused, after studying hard, scoring some wins, and gaining confidence, you may encounter projects that make you scratch your head and ask, "Where do I begin?" This is where the Project-Approach Strategy comes into play. (See *"A Project-Approach Strategy"* on page 67.) The project-approach strategy is meant to get you organized and focused. The project-approach strategy is all about calming your mind, focusing your efforts, figuring out what to do first, what to do next, and building and maintaining a sense of forward momentum.

Still, you may need help on broad-issue topics, like how to organize a project, how to design an application architecture, and many others. Books, videos, and online articles are all useful in helping you formulate an approach to a particular problem solution.

1.3 SPECIFIC ISSUE

Having trouble with a specific issue plagues most programmers every single day. You can get a feel for what's bothering developers around the world by looking at Google search statistics. You can query these at Google Trends: <https://trends.google.com/trends/>

Finding help on a specific issue requires the cultivation of your Google search chops. By Google search chops I mean learning how to use Google's advanced search features, referred to in programming-community vernacular as *Google Dorks*. I talk more about Google Dorks later.

Generally, when you need help on a specific issue, all you need, most of the time, is just a quick peek at a decent, working example. Staring at the official Python documentation may or may not be helpful. Stack Overflow shines when seeking help on a specific issue. I've devoted an entire section in this chapter to Stack Overflow.

1.4 TOOLING OVERLOAD

When you first start learning to program you are faced with not only learning how to program, you are also learning a programming language, its syntax and semantics, and all the tools required to produce a program in that language. These include interpreters or compilers, text editors, Integrated Development Environments (IDEs), operating system administration, repository operations, and underlying or fundamental technologies, like network protocols (i.e., TCP/IP, HTTP/S), data structures, and algorithms.

Focusing on the tooling side of things, an IDE can cause headaches if you start using one without learning how it works. If you depend too much upon IDEs to manage your projects you will lose control and find it difficult to recover from a simple configuration error. I've seen students lose everything after working for weeks on a project because they didn't understand how their IDE worked under the covers.

The best source of information about how to use your software development tools is from the tool makers. For example, Microsoft has excellent documentation for *Visual Studio Code*.

QUICK REVIEW

The type of help that may be most effective for you depends on the nature of the difficulties you're experiencing. These range from being completely lost to just needing help with a specific problem or development tool. Getting help early is critical because suffering too much setback can negatively affect your self esteem and confidence. You need small victories early and often. If you are stuck and having problems just know you are not alone and everyone who calls themselves a software developer today understands what you're going through.

2 NAVIGATING PYTHON'S OFFICIAL DOCUMENTATION

The official documentation for Python is located at <https://www.python.org/doc/>. This always points to the latest stable version. You can select different versions from a dropdown as shown in figure 6-1.

Referring to figure 6-1 — A good place to start is with the Python Setup and Usage section, followed by the Tutorial, and then browsing the Language Reference and Library Reference sections as required. Actually, I suggest browsing the Language and Library Reference sections straight away to get a feel for their content. Don't worry if you don't understand everything you see. It'll come soon enough.

A word of caution, though. While the Python documentation is super helpful, it can seem dense and obfuscated at times. You may find yourself staring blankly at the docs and have no idea what you're looking at. You're not alone. If figuring out how to use Python and all of its features was as easy as referring to the official documentation, there wouldn't be a zillion other sites,

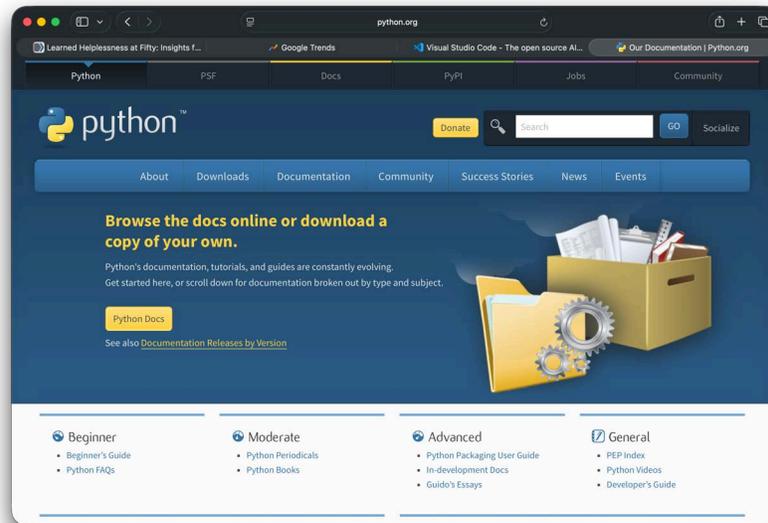


Figure 6-1: Official Python Documentation

books, courses, and tutorials on how to program with Python. Really, it's the same with any programming language.

QUICK REVIEW

Python's official documentation can be both helpful and hard to decipher, even for experienced programmers, but especially for novices. Take time to browse the Language Reference and Library Reference sections. Complete the Tutorial if you're new to Python.

3 HIGH-VALUE ONLINE HELP RESOURCES

There are a vast number of resources available online you can turn to for help, so much so, in fact, that a quick search can return an overwhelming list of choices. In this section, I present a concise selection of what I consider high-value resources. I've broken these down into the following categories: *Tutorials and Courses*, *Books*, *Online Development Environments*, *Developer Sites and Professional Societies*, and *Question and Answer (Q&A) Sites*. The list contains a mix of free and paid resources. Most resources are available for free, although access to some content may require creating an account on the site. You are, of course, free to flex your Google chops and add to the list.



3.1 TUTORIALS AND COURSES

Table 6-1 lists Python-centric tutorial and course sites along with general course and tutorial sites.

Course/Site	Type/Cost	Description
Google's Python Class	Online/Free	Google developers course.
Python For Beginners	Online/Free	Microsoft Learn Module.
Microsoft Learn	Online/Free	Microsoft Learn main site.
Udemy	Online/Paid	General training and certification.
Coursera	Online/Paid	College degree courses.
Real Python	Online/Free	Tons of awesome Python learning resources.
MIT OpenCourseWare	Online/Free	Free courses by Massachusetts Institute of Technology.
envato tuts+	Online/Free & Paid	A large collection of tutorials and courses, both free and paid.
Linux.com	Online/Free & Paid	Tons of learning resources related to Linux.
YouTube.com	Online/Free	Contains a ton of great and not-so-great tutorials. Finding a good channel can lead you to other helpful resources.

Table 6-1: Python and General Course Sites

3.2 BOOKS

Table 6-2 lists freely-available Python, software engineering, computer science, and other helpful books hosted online or downloadable in various formats. The first two links in the table point to lists of books.

Site/Link	Description
List of Free Python Books (GitHub)	List of sites and PDFs available free of charge grouped by target audience. I couldn't have compiled a better list myself.
Free Python Books	Links to free Python books and publisher resources.
Learning Python	Learning Python by Mark Lutz, 4th Edition, PDF
Python Basics: A Practical Introduction to Python 3	4th Edition, by David Amos, et. al.
Practical Introduction to Python Programming	By Brian Heinold, covers Python 3.5, so a little dated.

Table 6-2: Python, Software Engineering, Computer Science, and Other Helpful Books

Site/Link	Description
Fluent Python: Clear, Concise, and Effective Programming	This is a great book that dives deep into the inner workings of the Python data model.
Python Cookbook	Third Edition PDF. Cookbook series and cookbook type books in general are great resources to get quick answers to tricky problems. They are also a great learning tool.
Architecture Patterns with Python	Published by O'Reilly. Available online via the Cosmic Python site.
Software Engineering, 9th Edition	By Ian Sommerville, targets undergraduate and graduate students. Great book!
Software Architecture Patterns	By Mark Richards, published by O'Reilly. Short but informative report on various software architecture patterns.
Software Architecture Fundamentals Workshop Presentation, Part I	Highly informative presentation from a workshop given by Mark Richards and Neal Ford.
Software Architecture In Depth	TUM, Institut Für Informatik, by Lars Heinemann, et. al.
Introduction to Theoretical Computer Science	By Boaz Barak. Textbook in Preparation. Thorough coverage of theoretical computer science concepts.
Bash Reference Manual	From https://www.gnu.org , covers Bash 5.2.
Advanced Bash Scripting	By Michael F. Herbst, course notes. Very thorough.
Pro Git	In-depth guide to Git SCM. Links to download the PDF and EPUB versions.
Windows Internals, 7th Edition	If you want to dive deeper into how Windows 10+ works, this is the site for you.

Table 6-2: Python, Software Engineering, Computer Science, and Other Helpful Books (Continued)

3.3 ONLINE DEVELOPMENT ENVIRONMENTS

Table 6-3 lists online development environments and browser-embedded development environments.

Site	Type/Cost	Description
GitHub Codespaces	Interactive/Free with account	Select from multiple preconfigured code templates or blank template. Crank up a cloud-based development VM.
Online Python	Interactive/Free	Browser-based editor and runtime
Programiz: Python Online Compiler	Interactive/Free	Browser-based editor and runtime. Supports multiple languages.

Table 6-3: Online Development Environments

Site	Type/Cost	Description
Replit	Interactive/Free and Paid	Supports collaboration, sharing, and deployment. Multiple plans available.
JDoodle	Interactive/Free and Paid	Supports course assignments to students. It looks like it's free for the most part but organizations can request custom integrations. Supports up to Python 3.9.
W3 Schools	Free	Limited features.
Skulpt.org	Free	Client-side browser Python implementation
Trinket.io	Free	Embeddable Python editor and runtime. Free and paid plans.

Table 6-3: Online Development Environments (Continued)

3.4 DEVELOPER SITES AND PROFESSIONAL SOCIETIES

Table 6-4 lists developer sites and professional societies. I've also added several code challenge sites that help you sharpen your skills by completing coding challenges and competing against others.

Site	Type	Description
Google Developers Site	Developer Site	Lots of resources for Google and software in general.
Microsoft Developer Site	Developer Site	Lost of learning resources.
Apple Developers Site	Developer Site	Access to tutorials and software. I recommend creating an account. (You can login with your Apple ID) I also recommend subscribing if you're developing software on macOS, iOS, watchOS, etc.
Association For Computing Machinery (ACM)	Professional Society	Access to the Digital Library, courses, books, and journals.
Institute For Electrical And Electronic Engineers (IEEE)	Professional Society	Access to courses, books, and journals.
DZone	Developer Site	Huge collection of knowledge resources targeting developers
Code Wars	Challenge Site	Compete to sharpen you skills.

Table 6-4: Developer Sites

Site	Type	Description
Project Euler	Challenge Site	Mathematics and computer science challenges.
Code Combat	Challenge Site	Learn to code by gaming.
LeetCode	Skill Enhancement Site	Sharpen skills by completing coding challenges.

Table 6-4: Developer Sites (Continued)

3.5 QUESTION AND ANSWER (Q&A) SITES

Table 6-5 lists question and answer sites that allow users to post questions to a community of professionals and get replies. These sites require an account to post questions, but they are all free for individuals. Stack Overflow is a popular Q&A site for getting quick answers to tricky programming problems. I talk more about Stack Overflow in the next section.

Course/Site	Type	Description
Stack Overflow	Q&A (No chit-chat - no BS!)	Extremely popular with developers. (See <i>StackOverflow.com Section in this chapter.</i>)
Stack Exchange	Q&A	Stack Exchange is the umbrella organization for Stack Overflow and a host of other Q&A sites.
Reddit r/python	Q&A/Discussion Forum	You can post questions and may get a decent answer. Lots commentary and memes to wade through.
Code Ranch	Q&A/Discussion Forum	Novice friendly.

Table 6-5: Quick Answer Sites

QUICK REVIEW

There are many places on the web to get help. These range from complete courses, developer sites, books, professional societies, and question and answer sites. Most resources are available free of charge or require an account to access the goods.

4 STACKOVERFLOW.COM

Stack Overflow (<https://stackoverflow.com>) is the most popular developer Q&A platform in the known universe. So often do programmers find answers to tricky or perplexing questions on Stack Overflow that the act of going to the website, copying a code snippet, and pasting it into your program has become a meme in the form of a special keyboard called The Key. Figure 6-2 shows a picture of *The Key V2*, which I ordered from [Drop.com](#) especially for this book.



Figure 6-2: Stack Overflow The Key V2 Macropad from Drop.com

4.1 STACK OVERFLOW ETIQUETTE

Hold on! Before you go posting questions to Stack Overflow looking for homework answers, know this. The community will eat you for breakfast, lunch, and dinner. A common reply to requests for help with homework is: “Did you bother googling it?” or “Two seconds googling it and you’d have an answer!”. I’m being nice here. But don’t despair. I’d say a good 98% of legitimate questions you might have, up until you reach an advanced intermediate level of competence, are already answered for you on the site. You just need to find them. That’s where cultivating your Google Fu comes in handy.

Still, if you have a valid question, before posting it I implore you read Stack Overflow’s *How To Ask A Question* page: <https://stackoverflow.com/help/how-to-ask>, and abide by their *Expected Behavior* guidelines: <https://stackoverflow.com/help/behavior>. Seriously, fail to abide by these guidelines and the community will chew you up and spit you out. Too many strikes against you and they will cut your account.

QUICK REVIEW

Stack Overflow is the most popular software-development related Q&A platform on the Internet. You can easily find answers to your most pressing questions without ever posting a question on the site. However, if you do need to post a question, be sure to abide by their guidelines.

5 HOW TO COPY CODE FROM GITHUB

GitHub is filled with incredible code projects. Some projects you’ll want to clone to your local repository. I’ll talk more about how to do that in *Part II, Chapter 8: Source Code Management with Git and GitHub*. Most times, however, you’ll just want to copy some code straight off the

site. To do this, navigate to the file you want to copy and click the Raw view as shown in figure 6-3.

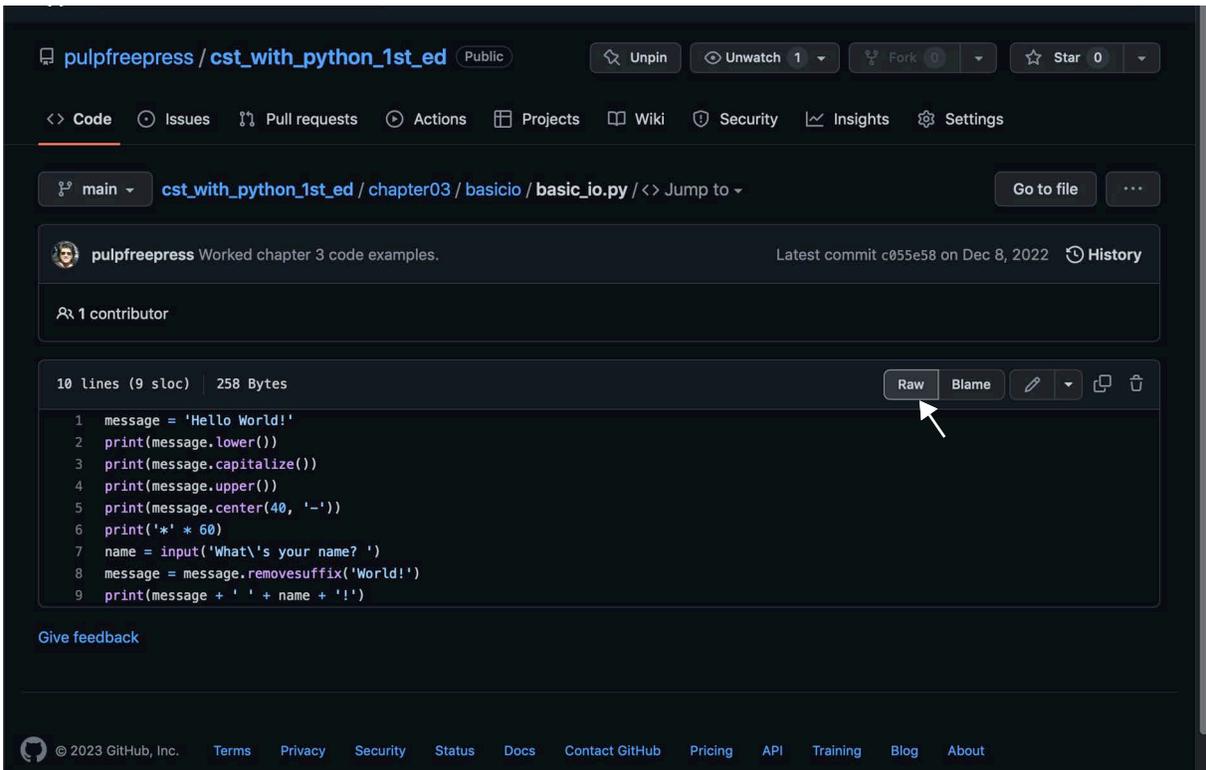


Figure 6-3: Click Raw Button...

Referring to figure 6-3 — Click the Raw button to get a clean code listing suitable to copy as shown in figure 6-4.



Figure 6-4: Raw Code Listing Suitable To Copy

Referring to figure 6-4 — At this point, select and copy the code that interests you.

5.1 CITE YOUR SOURCE AND ABIDE BY LICENSING

If you do feel the need to copy code from GitHub to use in your project, be sure you cite the source by *author*, *project name*, and *filename*. Also, abide by the licensing set for the project. Some licenses allow free use so long as you cite the source while other types of licenses do not.

QUICK REVIEW

GitHub is a great place to find code to use in your programs. Click the Raw button to get a clean listing of the code suitable to copy. Cite your source and abide by project licensing.

6 GOOGLE DORKS

The fastest way, hands down, to find help on the web is by searching for it with Google. However, to really zero in on what you want and filter out all the fluff, you'll need to learn a few of Google's advanced search features, commonly referred to as Google Dorks. *The SANS Google Hacking and Defense Cheat Sheet* is a great Google Dorks reference. (*SANS* refers to the *SANS Institute*. The name *SANS* is derived from *SysAdmin, Audit, Network, and Security*.) Google's Advanced Search page, https://www.google.com/advanced_search, also allows you to apply additional search filtering not available with Google dork strings, such as language and usage rights.

6.1 EXAMPLE DORKS

Table 6-6 lists a few example dorks.

Dork	Explanation
python string formatting site:org	Search for the strings “python”, “string”, and “formatting” on sites with a Top Level Domain of “org”.
python string formatting site:org inurl:blog	Same as above, but limit results to URLs that contain the string “blog”.
“python string” formatting site:org inurl:blog	Search for the exact string “python string” and the string “formatting” on sites with TLD of “org” with “blog” in the URL.
“python string” formatting after:2019-01-01	Search for exact string “python string” and the string “formatting”, and filter results to those posted in January 2019 onwards. Handy to filter out stale information. That returns a nice juicy find: https://www.pythoncheatsheet.org/cheatsheet/string-formatting
python 3.10 cookbook after:2019-01-01 filetype:pdf	Search for “python” “3.10” “cookbook” posted after 1 January 2019 onwards with file type of PDF. Lots of interesting links in this batch. Here's one: Python For Control Engineering — And another: gcovr.com . I had no idea this package existed.
python internals filetype:pdf after:2019-01-01	Nice catch here for the curious: https://www.bsides-dub.ie/past/media/2021/a_glance_at_interpreted_language_bytecode_trickery.pdf — And something even more astounding: Invent Your Own Computer Games With Python, 4th Edition

Table 6-6: Example Google Dorks

Referring to table 6-6 — Copy and paste the dork into your browser search bar and see what comes back. Many times, what you find completely surpasses all expectations. The Internet is like a vast field of diamonds just laying around waiting to be picked up.

QUICK REVIEW

Use Google Dorks or Google’s Advanced Search page to dial in your search for help.

7 ASSOCIATION OF COMPUTING MACHINERY (ACM)

I’d like to plug my favorite professional society for computing professionals: *The Association of Computing Machinery* or simply *The ACM* (<https://www.acm.org>). The primary reason I like the ACM is because membership comes with access to significant learning resources via their Learning Center, which includes *Skillsoft Percipio* and *Pluralsight*. For a small extra fee you can gain access to ACM’s vast Digital Library, which includes works published by the ACM over the years. Joining the ACM puts a vast array of knowledge resources at your fingertips. You can also subscribe to the *O’Reilly* technical resource library.

I spend most of my time on the ACM site staying sharp by taking advantage of the books and courses available in Skillsoft Percipio, followed closely by conducting research in the Digital Library. Figure 6-5 shows a typical Skillsoft Percipio search.

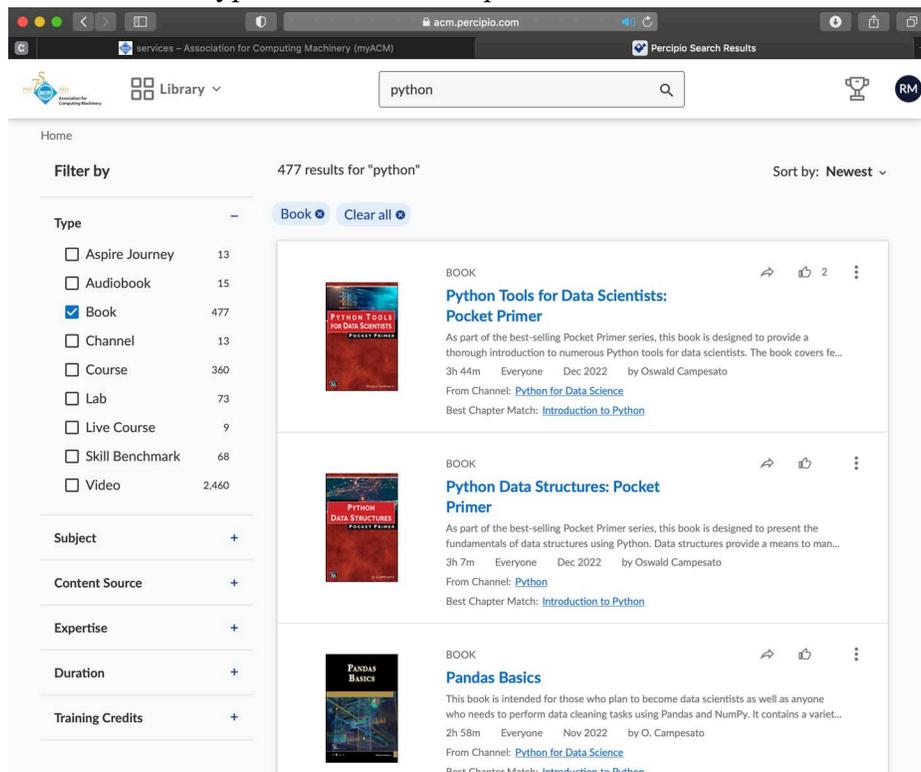


Figure 6-5: Searching Skillsoft Percipio for New Python Books

Referring to figure 6-5 — Here I’m searching for new Python books. Having access to such a wide array of learning resources more than justifies the yearly dues.

As a student, you often have access to similar resources via your school library, but as a professional, companies may or may not provide access to sites like Skillssoft. However, most companies will reimburse you for professional society dues.

7.1 SPECIAL INTERESTS GROUPS (SIGS)

If you have particular interests in a computing field beyond the general, you can join a Special Interest Group or SIG. I belong to the *Special Interest Group on Software Engineering* or *SIG-SOFT*. See figure 6-6.

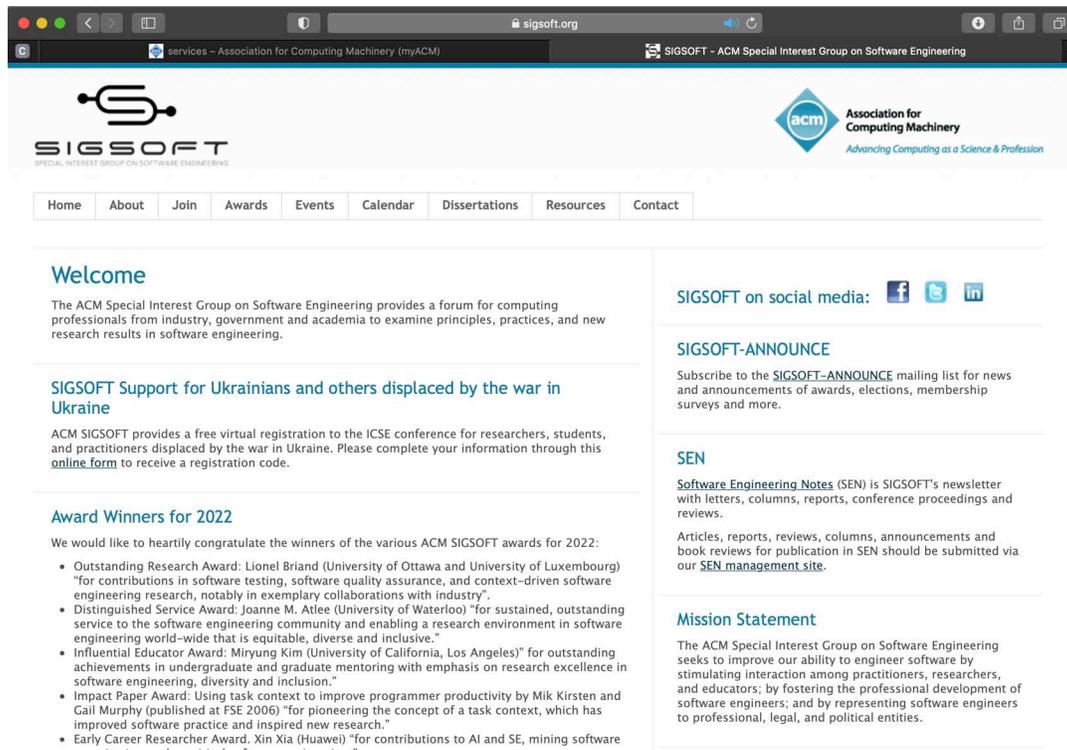


Figure 6-6: Special Interest Group on Software Engineering (SIGSOFT) Home Page

Referring to figure 6-6 — I particularly enjoy reading the Software Engineering Notes or SEN, especially Peter G. Neumann’s *Risks Digest*. Note that SIG membership incurs additional membership costs. Worth every penny.

7.2 ACM CHAPTERS

If you seek involvement to expand your network and learn more about computing by engaging in exciting discussions and projects, the ACM sponsors local student and professional chapters. Just use your new Google Dork skills to see what’s available in your area. The ACM also provides ACM-W and SIG chapters.

QUICK REVIEW

The Association of Computing Machinery (ACM) is my favorite professional society targeting computing professionals. Access to learning resources is included with membership. You can

join Special Interest Groups to keep tabs on computing topics of interest. You can get involved by seeking out and joining (or starting) a local ACM Chapter.

8 THE EMERGENCE OF AI-ASSISTED CODING

Since writing the original draft of this chapter in early 2022, AI-Assisted coding has exploded onto the scene. As I write this in late 2025 there are a boatload of AI sites and coding assistants, but the top three include [ChatGPT.com](https://chatgpt.com) (*Codex*), [Claude.ai](https://claude.ai) (Claude), and x.ai (Grok). I'll not dive deep into these technologies here, rather, I'd like to provide some advice on how you might use them to learn how to code.

You could go to ChatGPT and ask it to write your programming project for you. For example, navigate on over to <https://chatgpt.com> and enter the following prompt:

Create a Python application that controls a remote-controlled rat around a 20 x 20 grid floor.

You will be astounded at the results. If you can figure out how to run the resulting code, you should see something similar to what's shown in figure 6-7.

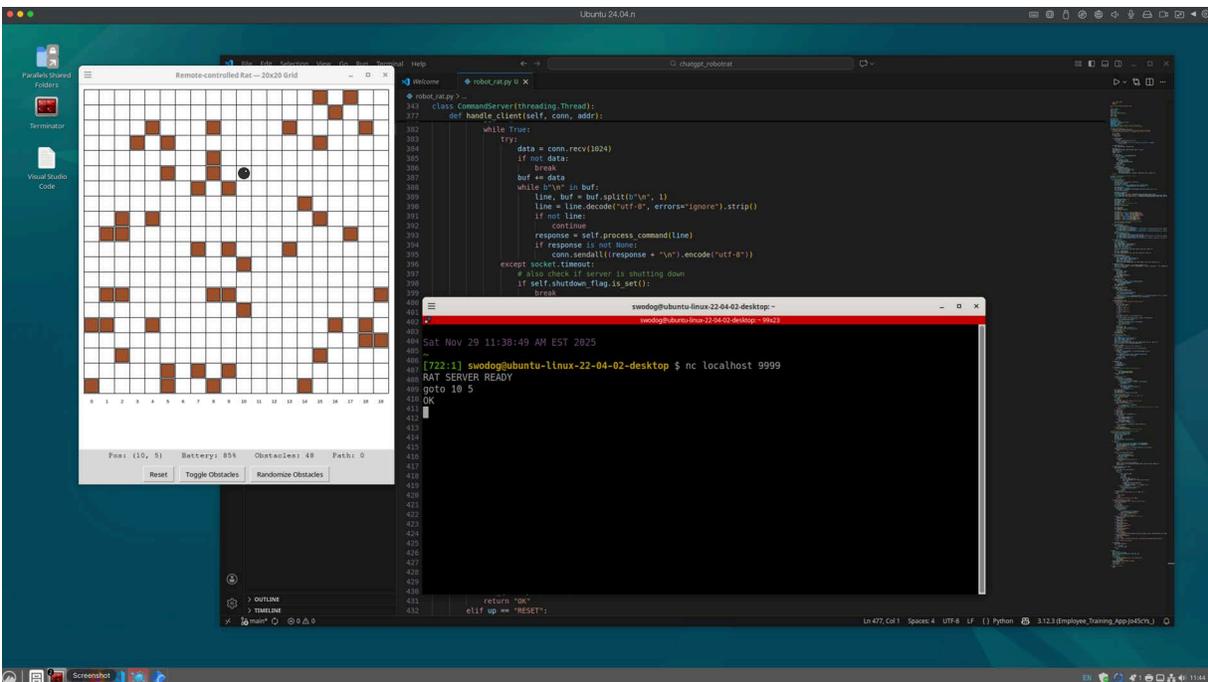


Figure 6-7: Robot Rat Application Generated by ChatGPT

Referring to figure 6-7 — ChatGPT generated a client-server application with a Tkinter graphical user interface. You connect to the application via a terminal session and command the robot rat to move to a set of coordinates on the floor. As the robot rat executes the move, it avoids obstacles (dark squares) it encounters along the way. It's quite impressive to say the least.

As a novice, what do you do? Turn this project in and claim it as your own? One sure way your instructor will know you didn't write the code is when they ask you to shut your laptop and explain what you did. Doh! F-city!

A better way to use these extremely powerful AI tools, especially when you're first learning to program, is to ask specific questions, study the resulting code, figure out how it works, and incorporate it into your program. Also, give credit where credit is due.

I have to say, though, the reason I like programming, and still work as a software engineer, is because I enjoy the dopamine hit I get when I solve a particularly vexing problem. But there's no shame in getting help from AI as long as you understand how it's trying to help you.

QUICK REVIEW

AI programming tools have become extremely powerful. I recommend asking specific questions, study the resulting code, understand how it works, and only then incorporate the results into your programs. Finally, give credit where credit is due.

SUMMARY

The type of help that may be most effective for you depends on the nature of the difficulties you're experiencing. These range from being completely lost to just needing help with a specific problem or development tool. Getting help early is critical because suffering too much setback can negatively affect your self esteem and confidence. You need small victories early and often. If you are stuck and having problems just know you are not alone and everyone who calls themselves a software developer today understands what you're going through.

Python's official documentation can be both helpful and hard to decipher, even for experienced programmers, but especially for novices. Take time to browse the Language Reference and Library Reference sections. Complete the Tutorial if you're new to Python.

There are many places on the web to get help. These range from complete courses, developer sites, books, professional societies, and question and answer sites. Most resources are available free of charge or require an account to access the goods.

Stack Overflow is the most popular software-development related Q&A platform on the Internet. You can easily find answers to your most pressing questions without ever posting a question on the site. However, if you do need to post a question, be sure to abide by their guidelines.

GitHub is a great place to find code to use in your programs. Click the Raw button to get a clean listing of the code suitable to copy. Cite your source and abide by project licensing.

Use Google Dorks or Google's Advanced Search page to dial in your search for help.

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AI programming tools have become extremely powerful. I recommend asking specific questions, study the resulting code, understand how it works, and only then incorporate the results into your programs. Finally, give credit where credit is due.

SKILL-BUILDING EXERCISES

1. **Explore Stack Exchange Sites:** The Stack Exchange network consists of over 60+ sites. Explore the sites and see if you find something interesting: <https://stackexchange.com/sites>
2. **Create Stack Overflow Account:** If you don't already have one, create a Stack Overflow account so you can start earning points and building your reputation.
3. **Polish Your Google Dorks:** Download the Google Hacking And Defense Cheat Sheet from SANS.org and practice targeted searching: <https://sansorg.egnyte.com/dl/f4TCYNMgN6>
4. **Join The ACM!:** If you liked what you learned about the Association of Computing Machinery (ACM) in this chapter, I urge you to join. They offer student memberships and tons of great learning resources. Attending local ACM chapter meetings is a great way to engage with and meet like-minded people.
5. **Research Learned Helplessness:** Flex your Google Dork skills and research the phenomenon of Learned Helplessness and how it can negatively impact someone struggling to learn fundamental programming and software development concepts.
6. **Learn Stack Overflow Etiquette:** Once you create your Stack Overflow account (Suggested Project 2 above) navigate over to the [How To Ask A Question](#) and [Expected Behavior](#) pages and spend some time getting to learn the ropes.
7. **Seek Out an ACM Chapter:** Not sure about joining the ACM? Try it out by attending a local ACM Chapter meeting. There are also ACM-W Chapters dedicated to Women in Computing.
8. **Browse and Explore:** Browse and explore the resources listed in tables 6-1 through 6-5. Create a folder to store links to sites you find useful and books you think will come in handy.
9. **Explore AI-Assisted Programming:** Using AI agents to help write code is referred to as [Agentic Coding](#). Explore the three AI sites discussed in this chapter and compare their approaches and capabilities.

SUGGESTED PROJECTS

None

SELF-TEST QUESTIONS

1. What are Google Dorks?

2. Have you ever experienced Learned Helplessness? If so, write a little bit about what you were attempting to do and how failure and eventual success affected you.
3. What two resources you should consult before posting a question on Stack Overflow?
4. Have you ever benefited from having a tutor or mentor? If so, write a brief paragraph describing what was giving you difficulty and how the tutor helped you.
5. Do you feel, after reading this chapter, you have a better understanding of how to get help and maintain forward momentum? If not, what topics do you feel should be added?

REFERENCES

Stack Exchange Website, <https://stackexchange.com>

Stack Exchange Family of Websites, <https://stackexchange.com/sites>

Stack Overflow, <https://stackoverflow.com>

Association of Computing Machinery (ACM), <https://acm.org>

ComputerScience.Org, <https://www.computerscience.org>

Google Developers, <https://developers.google.com>

Google's Python Class, <https://developers.google.com/edu/python>

Google Dork Cheat Sheet, <https://gist.github.com/sundowndev/283efaddb-cf896ab405488330d1bbc06>

Google Hacking and Defense Cheat Sheet, SANS, <https://sansorg.egnyte.com/dl/f4TCYN-MgN6>

Learned Helplessness at Fifty: Insights from Neuroscience, National Institutes of Health, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4920136/>

Microsoft Learn, <https://learn.microsoft.com>

NOTES
