Google Colab Tutorial

Using the current Colab interface (as of Feb 2026)

Last updated: 2026-02-15

This guide walks you through the Colab interface, shows where key tools live, and provides a menu reference you can keep open while you work.

What you need: a Google account, a modern browser (Chrome, Edge, Firefox, Safari), and an internet connection.

Contents

1. What is Google Colab?

Google Colab (short for Colaboratory) is a hosted Jupyter Notebook environment that runs Python in your browser. You can write code, run it on a cloud runtime, and share your notebook like a Google Drive document. [1]

Colab is widely used in classes because it removes setup friction: students can start coding immediately, and instructors can share notebooks as assignments or demos.

Quick idea: A Colab notebook is a list of cells. You add code cells to run Python, and text cells to write explanations in Markdown.

2. Open Colab and create a notebook

Fastest path: open **colab.new** to create a new notebook in your browser. [3]

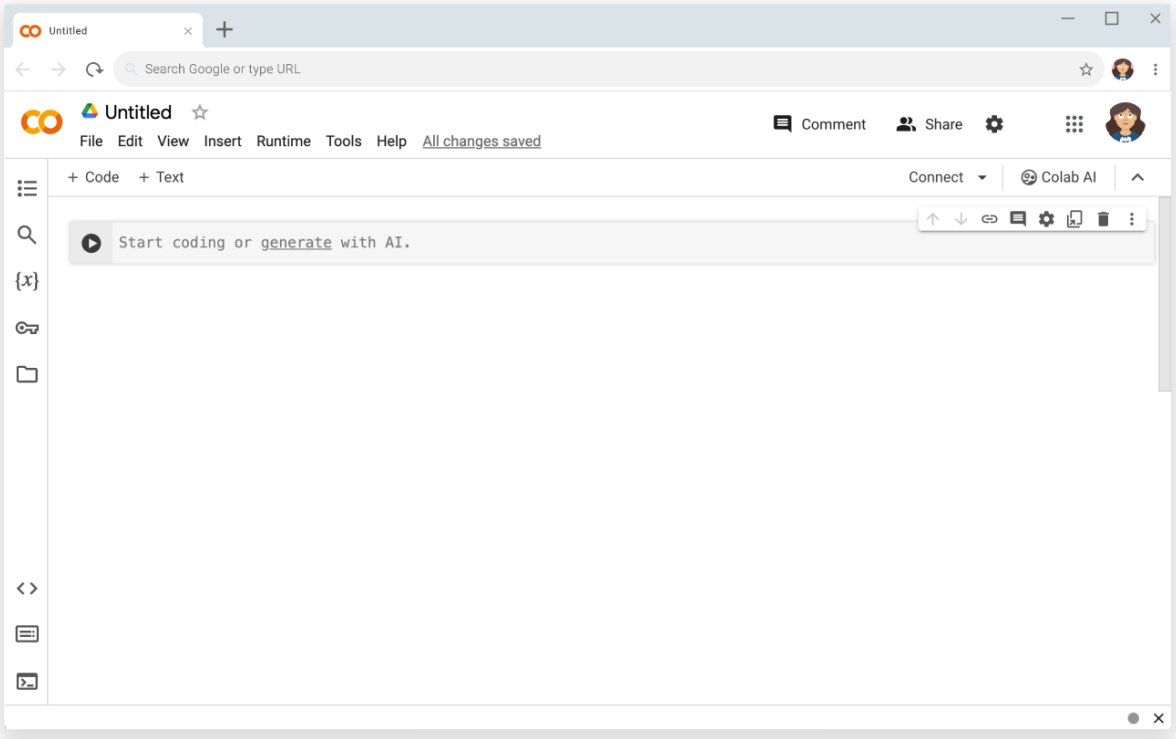

Figure 1. *A new Colab notebook in the browser. Notice the menu bar (File, Edit, View, Insert, Runtime, Tools, Help) and the toolbar buttons for adding cells. Source: Chrome for Developers ("Web AI model testing in Google Colab") [3].*

To create a notebook from inside an existing notebook, open **File** and choose **New notebook** (Figure 2). [4]

Figure 2. *Using the File menu to create a new notebook. Source: Christian Mills ("Getting Started with Google Colab") [4].*

3. A quick tour of the interface

Before you write code, get familiar with the four areas you will use most (Figure 3):

- **Menu bar**: file actions, runtime controls, tools, and help.
- **Toolbar**: quick buttons like + Code, + Text, and (depending on the notebook) Copy to Drive.
- **Side panel**: table of contents, files, and other utilities.
- **Notebook area**: where your cells live and where output appears.

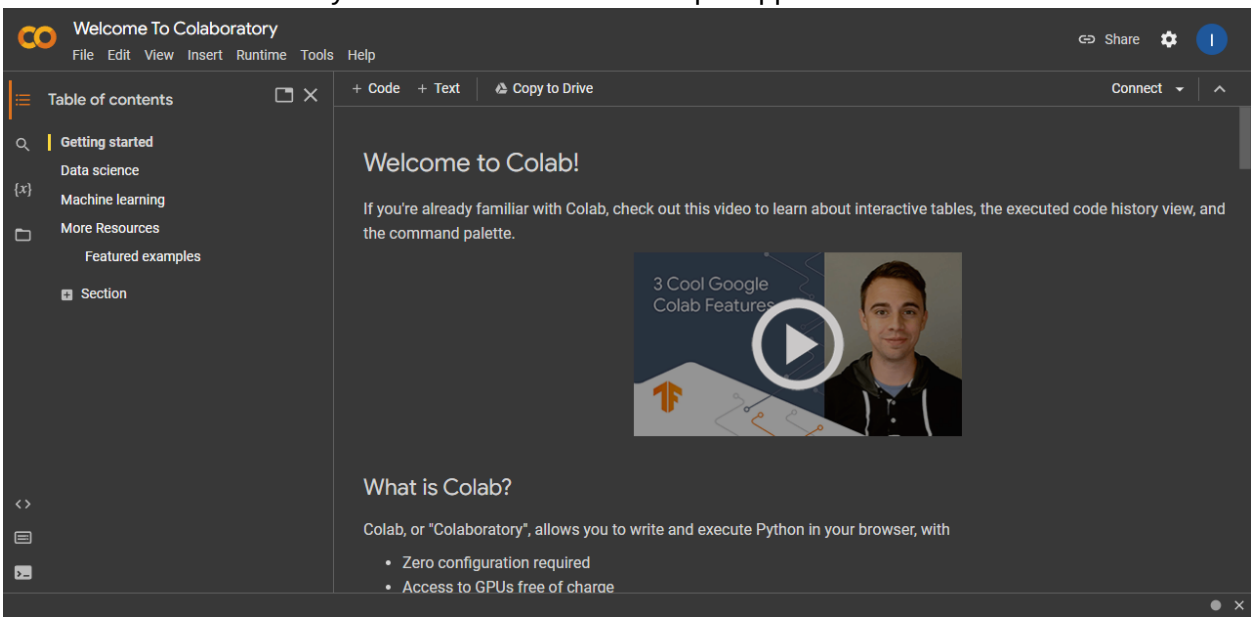

Figure 3. *Interface overview of a Colab notebook. Source: Christian Mills ("Getting Started with Google Colab") [4].*

4. Working with cells

Colab notebooks are made of cells. The two cell types you will use constantly are:

- **Code cells** for Python (and shell commands that start with **!**).
- **Text cells** for Markdown (notes, headings, links, math).

To add cells, use the toolbar buttons **+ Code** and **+ Text** (shown near the top of Figure 3). [4]

To run a code cell, press **Shift+Enter**. Output appears directly under the cell.

```
Example (run in a code cell):
print('Hello from Colab!')

# Shell commands start with an exclamation mark
!python --version
```

5. Working with files and data

Your runtime has a temporary filesystem. Files you upload live there while the runtime is running. When the runtime disconnects, those files can disappear, so save important work to Google Drive or download it. [4]

Open the file browser from the left sidebar (Figure 4). [4]

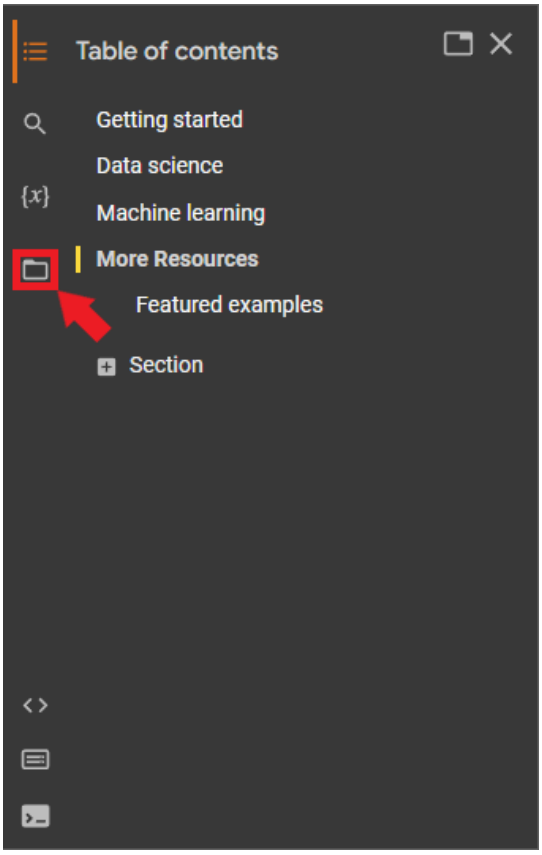

Figure 4. *Opening the Files panel from the left sidebar. Source: Christian Mills [4].*

To download a file back to your computer, right-click it and select **Download** (Figure 5). [4]

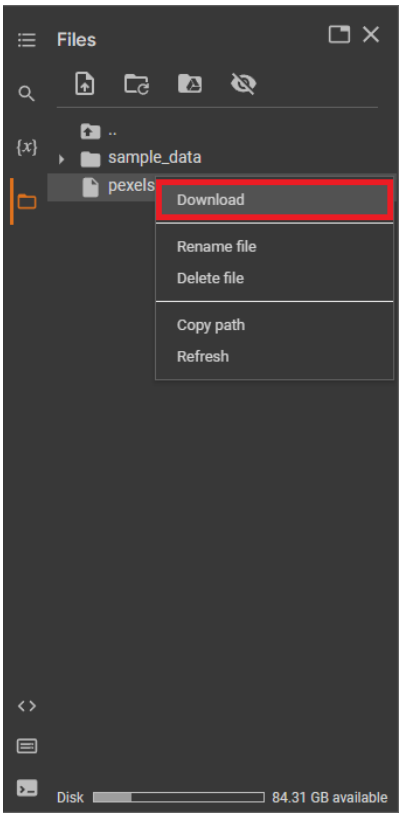

Figure 5. *Downloading a file from the Files panel. Source: Christian Mills [4].*

To use Google Drive files, mount Drive from the Files panel. Colab will add a short code cell that asks you to authorize access. [4]

6. Runtimes and hardware acceleration

A Colab runtime is the computer that executes your notebook. You can restart it, disconnect it, or switch to a different hardware accelerator such as a GPU or TPU. [3][4]

There are two common places to manage hardware:

- **Runtime menu** in the menu bar (Figure 6).
- **Connect** drop-down near the top right (Figure 7). [3]

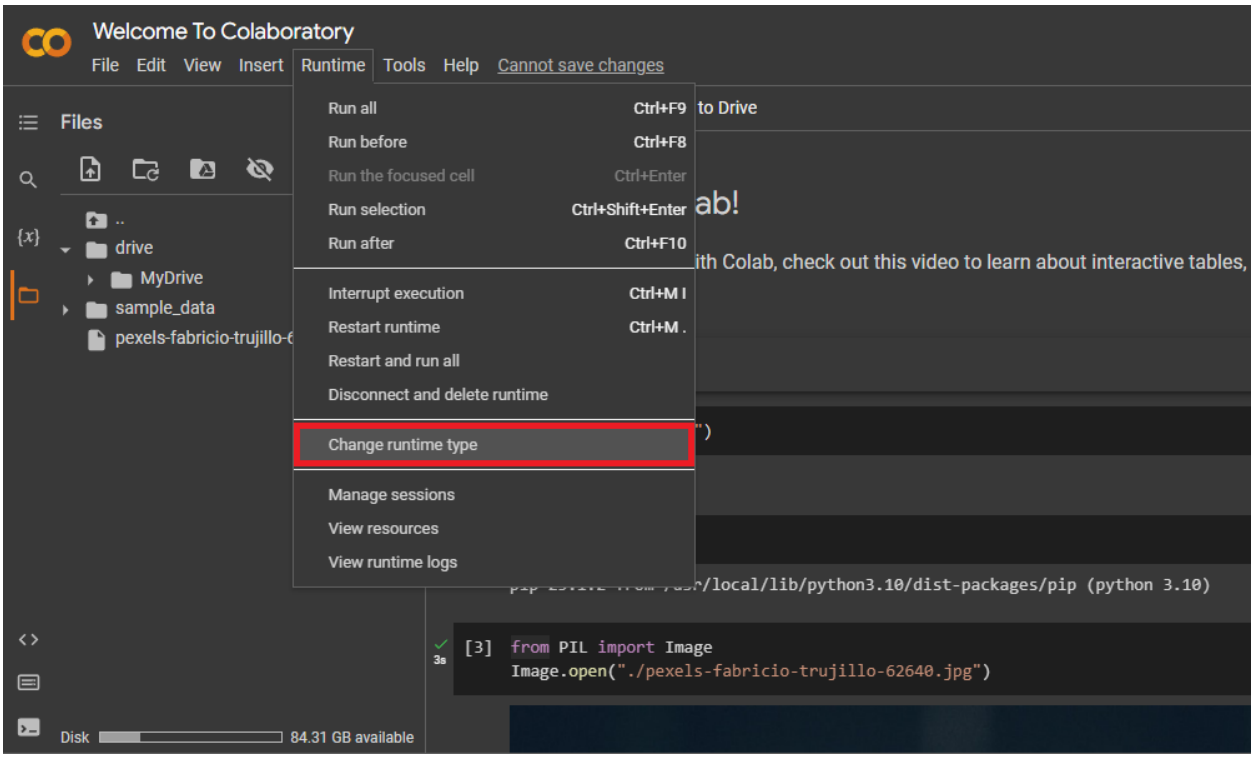

Figure 6. *The Runtime menu includes actions like interrupting execution, restarting, and changing runtime type. Source: Christian Mills [4].*

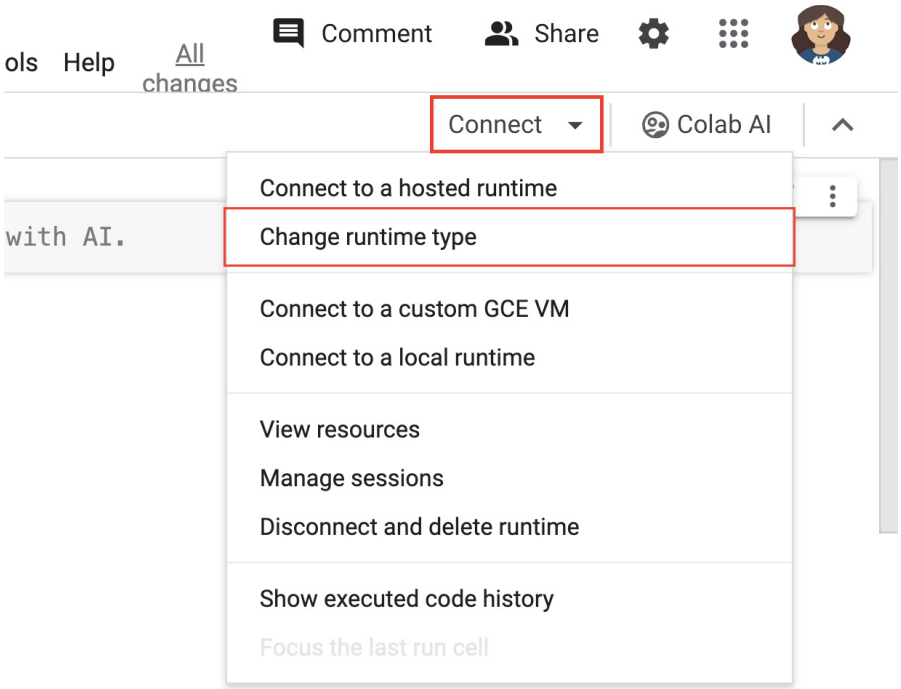

Figure 7. *The Connect drop-down can also open runtime settings (including Change runtime type) and session management. Source: Chrome for Developers [3].*

To switch to a GPU: choose **Change runtime type**, then pick a hardware accelerator and save (Figures 7 and 8). [3][4]

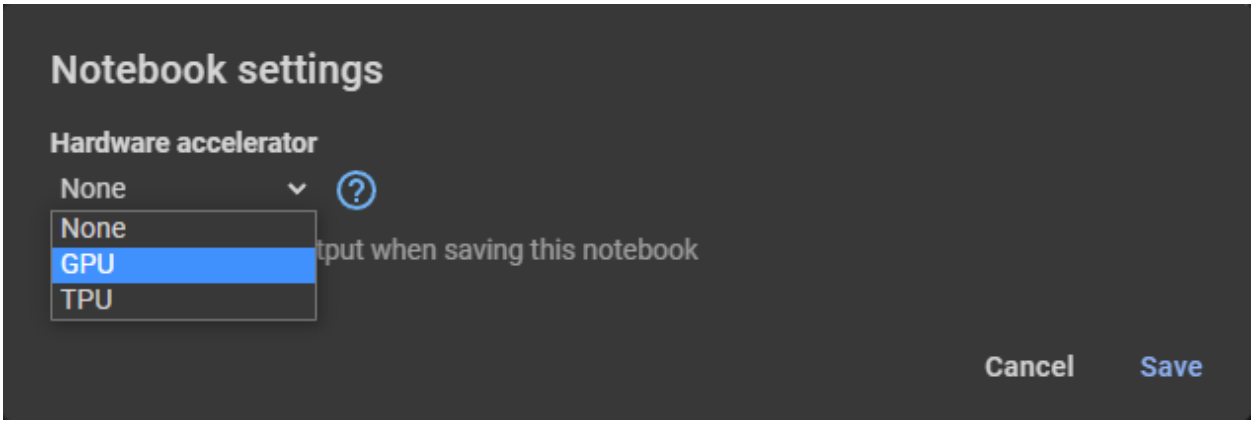

Figure 8. *Hardware accelerator options inside Notebook settings. Source: Christian Mills [4].*

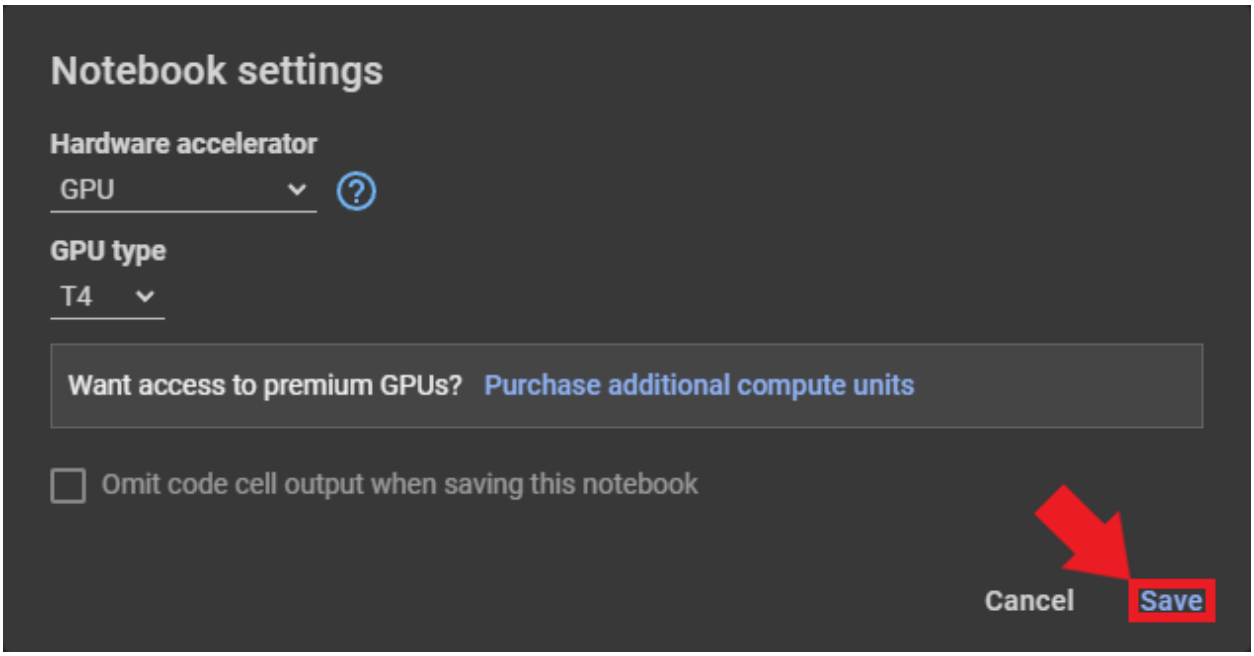

Figure 9. *Notebook settings with GPU selected. Source: Christian Mills [4].*

If you are on the free tier, GPU and TPU access is limited, so only enable acceleration when you need it. [4]

Tip: Verify GPU access by running **!nvidia-smi** in a code cell.

7. Saving, exporting, and sharing

Colab saves notebooks to Google Drive (typically in a folder named "Colab Notebooks"). You can also download a copy or save to GitHub from the File menu. [4]

Common export options include downloading the notebook as an **.ipynb** file, or saving a copy to GitHub so you can version-control your work. [4]

8. Gemini in Colab (AI assistance)

As of the AI-first Colab experience, Gemini features are integrated throughout the interface. One entry point is the Gemini spark icon in the notebook footer, which opens the main chat panel. [1][2]

Figure 10. *Gemini spark icon in the notebook footer (left) that opens the chat panel. Source: Google Developers Blog [2].*

You may also see AI code completion as you type, and tools that can suggest fixes for errors. Colab's FAQ notes that the agent can propose a plan for multi-step tasks and you choose whether to execute it. [1]

Safety note: Treat AI output as a draft. Verify results, especially in graded work, and do not paste secrets or private data into prompts.

9. Menu reference (top bar)

The top menu bar includes these menus (visible in Figure 3): **File**, **Edit**, **View**, **Insert**, **Runtime**, **Tools**, and **Help**. [4]

Exact options can vary by account type and feature rollouts, but the tasks below are the ones students use most often.

Menu	What you use it for	Examples of items you will likely see
File	Create, open, save, and export notebooks	New notebook, Open notebook, Upload notebook, Save, Save a copy in Drive, Save a copy in GitHub, Download, Print [4]
Edit	Edit cells and notebook settings	Undo/Redo, Cut/Copy/Paste cells, Find and replace, Notebook settings (also appears in other places) [1][4]
View	Change what you see on screen	Toggle side panels, show line numbers, collapse/expand sections (options vary)
Insert	Insert new content into the notebook	Code cell, Text cell, (sometimes) form fields and sections
Runtime	Run code and manage the runtime	Run all, Interrupt execution, Restart runtime, Change runtime type, Manage sessions, View resources (see Figure 6) [4]
Tools	Productivity tools and advanced utilities	Command palette, Keyboard shortcuts, Settings, and other notebook tools (options vary)
Help	Documentation and support	Search help, view keyboard shortcuts, report issue / send feedback (options vary)

Runtime menu items (example)

Figure 6 shows a typical set of Runtime menu items. Depending on updates, you might see more or fewer, but the core actions are consistent.

- Run all
- Run before
- Run selection
- Run after
- Interrupt execution
- Restart runtime
- Restart and run all
- Disconnect and delete runtime
- Change runtime type
- Manage sessions
- View resources
- View runtime logs

10. Common troubleshooting

My notebook is slow or stuck. Try **Runtime > Interrupt execution**. If that does not work, restart the runtime (Figure 6). [4]

I lost files. If your runtime disconnected, the temporary filesystem may have reset. Keep important data in Drive or download it (see Figure 5). [4]

I do not see Gemini features. Colab's FAQ notes eligibility requirements such as supported locales and an account age requirement. Use **Help > Send feedback** if you believe you should have access. [1]

References

- [1] Google Research. "Google Colab FAQ." https://research.google.com/colaboratory/faq.html (accessed 2026-02-15).
- [2] Google Developers Blog. "Supercharge your notebooks: The new AI-first Google Colab is now available to everyone." https://developers.googleblog.com/new-ai-first-google-colab-now-available-to-everyone/ (published 2025-06-24; accessed 2026-02-15).
- [3] Chrome for Developers. "Web AI model testing in Google Colab." https://developer.chrome.com/docs/web-platform/webgpu/colab-headless (last updated 2024-01-16; accessed 2026-02-15).
- [4] Christian Mills. "Getting Started with Google Colab." https://christianjmills.com/posts/google-colab-getting-started-tutorial/ (published 2023-05-14; accessed 2026-02-15).