

## Release notes ×

...

```
pip install streamlit

→ Collecting streamlit
  Downloading streamlit-1.41.1-py2.py3-none-any.whl.metadata (8.5 kB)
Requirement already satisfied: altair<6,>=4.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: blinker<2,>=1.0.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: cachetools<6,>=4.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: click<9,>=7.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: numpy<3,>=1.23 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: packaging<25,>=20 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: pandas<3,>=1.4.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: pillow<12,>=7.1.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: protobuf<6,>=3.20 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: pyarrow>=7.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: requests<3,>=2.27 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: rich<14,>=10.14.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: tenacity<10,>=8.1.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: toml<2,>=0.10.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: typing-extensions<5,>=4.3.0 in /usr/local/lib/python3.10/dist-packages
Collecting watchdog<7,>=2.1.5 (from streamlit)
  Downloading watchdog-6.0.0-py3-none-manylinux2014_x86_64.whl.metadata (44 kB)
                                             44.3/44.3 kB 1.8 MB/s eta 0:00:00
Requirement already satisfied: gitpython!=3.1.19,>=4,>=3.0.7 in /usr/local/lib/python3.10/dist-packages
Collecting pydeck<1,>=0.8.0b4 (from streamlit)
  Downloading pydeck-0.9.1-py2.py3-none-any.whl.metadata (4.1 kB)
Requirement already satisfied: tornado<7,>=6.0.3 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: jinja2 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: jsonschema>=3.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: narwhals>=1.14.2 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: gitdb<5,>=4.0.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: python-dateutil>=2.8.2 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: pytz>=2020.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: tzdata>=2022.7 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: markdown-it-py>=2.2.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: pygments<3.0.0,>=2.13.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: smmap<6,>=3.0.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: MarkupSafe>=2.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: attrs>=22.2.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: jsonschema-specifications>=2023.03.6 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: referencing>=0.28.4 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: rpds-py>=0.7.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: mdurl~0.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.10/dist-packages
Downloading streamlit-1.41.1-py2.py3-none-any.whl (9.1 MB)
                                             9.1/9.1 MB 30.9 MB/s eta 0:00:00
Downloading pydeck-0.9.1-py2.py3-none-any.whl (6.9 MB)
                                             6.9/6.9 MB 27.6 MB/s eta 0:00:00
Downloading watchdog-6.0.0-py3-none-manylinux2014_x86_64.whl (79 kB)
                                             79.1/79.1 kB 3.4 MB/s eta 0:00:00
Installing collected packages: watchdog, pydeck, streamlit
Successfully installed pydeck-0.9.1 streamlit-1.41.1 watchdog-6.0.0
```

pip install newspaper3k

```
→ Requirement already satisfied: lxml>=3.6.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: nltk>=3.2.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: requests>=2.10.0 in /usr/local/lib/python3.10/dist-packages
Collecting feedparser>=5.2.1 (from newspaper3k)
  Downloading feedparser-6.0.11-py3-none-any.whl.metadata (2.4 kB)
Collecting tldextract>=2.0.1 (from newspaper3k)
  Downloading tldextract-5.1.3-py3-none-any.whl.metadata (11 kB)
Collecting feedfinder2>=0.0.4 (from newspaper3k)
  Downloading feedfinder2-0.0.4.tar.gz (3.3 kB)
  Preparing metadata (setup.py) ... done
Collecting jieba3k>=0.35.1 (from newspaper3k)
  Downloading jieba3k-0.35.1.zip (7.4 MB)
                                             7.4/7.4 MB 57.0 MB/s eta 0:00:00
  Preparing metadata (setup.py) ... done
Requirement already satisfied: python-dateutil>=2.5.3 in /usr/local/lib/python3.10/dist-packages
```

Please follow our [blog](#) to see more information about new features, tips and tricks, and featured notebooks such as [Analyzing a Bank Failure with Colab](#).

## 2025-06-16

- At Google I/O Colab announced a new, reimagined AI-first Colab, bringing a powerful agentic collaborator into the notebook. Learn more [here](#).
- Huggingface integration: We've partnered with Hugging Face to add "Open in Colab" support for all models on the Hugging Face Hub. Now you can directly launch a Colab notebook from any model card, making it easier than ever to experiment with and evaluate models. View the announcement [blog](#) to learn more.
- Python package upgrades
  - accelerate 1.6.0 -> 1.7.0
  - bigframes 2.3.0 -> 2.6.0
  - earthengine-api 1.5.14 -> 1.5.19
  - gdal 3.6.4 -> 3.8.4
  - google-genai 1.14.0 -> 1.20.0
  - grpcio 1.71.0 -> 1.73.0
  - highspy 1.10.0 -> 1.11.0
  - huggingface-hub 0.31.1 -> 0.33.0
  - narwhals 1.38.2 -> 1.42.0
  - networkx 3.4.2 -> 3.5
  - openai 1.78.0 -> 1.86.0
  - pandas-gbq 0.28.0 -> 0.29.1
  - panel 1.6.3 -> 1.7.1
  - pymc 5.22.0 -> 5.23.0
  - pytensor 2.30.3 -> 2.31.3
  - spacy 3.8.5 -> 3.8.7
  - wandb 0.19.11 -> 0.20.1
  - zipp 3.21 -> 3.23
- Python package inclusions
  - gradio 5.31.0

## 2025-05-12

- Pro Subscriptions give 600 CCUs now: <https://x.com/GoogleColab/status/19133122729672093>
- Launched Colab's fastest deep learning accelerator: v6e-1 (Trillium) TPUs!! 2x the high bandwidth memory as v5e-1 (32GB) and a whopping peak rating of 918 BF16 TFLOPS (nearly 3x A100)! Try them out with JAX & Flax in our [example notebook](#)
- Enabled UTF-8 mode by default for Python
- Added CUDA.jl and Pluto.jl for Julia
- Enabled OpenCL for LightGBM
- Python package upgrades
  - accelerate 1.5.2 -> 1.6.0
  - bigframes 1.42.0 -> 2.3.0
  - bokeh 3.6.3 -> 3.7.2
  - cudf-cu12 24.12.0 -> 25.2.1
  - google-genai 1.9.0 -> 1.14.0
  - highspy 1.9.0 -> 1.10.0
  - holiday 0.69 -> 0.72
  - huggingface-hub 0.30.1 -> 0.31.1
  - lxml 5.3.1 -> 5.4.0
  - nx\_cugraph\_cu12 24.12.0 -> 25.2.1
  - openai 1.70.0 -> 1.78.0
  - peft 0.14.0 -> 0.15.2
  - polars 1.14.0 -> 1.21.0
  - pyomo 6.8.2 -> 6.9.2
  - scipy 1.14.1 -> 1.15.3
  - sentence-transformers 3.4.1 -> 4.1.0
  - transformers 4.50.3 -> 4.51.3
  - urllib3 2.3.0 -> 2.4.0
  - xarray 2025.1.2 -> 2025.3.1
- Python package inclusions
  - dataproc-spark-connect 0.7.3
  - libpsyl 4.13.0
  - lightgbm
  - stumpy 1.13.0
  - torchao 0.10.0
  - torchtune 0.6.1
  - tsfresh 0.21.0

```

Preparing metadata (setup.py) ... done
Requirement already satisfied: click in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: joblib in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: regex>=2021.8.3 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: tqdm in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.10/dist-packages
Collecting requests-file>=1.4 (from tldextract>=2.0.1->newspaper3k)
    Downloading requests_file-2.1.0-py2.py3-none-any.whl.metadata (1.7 kB)
Requirement already satisfied: filelock>=3.0.8 in /usr/local/lib/python3.10/dist-packages
    Downloading newspaper3k-0.2.8-py3-none-any.whl (211 kB)
                                                211.1/211.1 kB 13.9 MB/s eta 0:00:00
Downloaded cssselect-1.2.0-py2.py3-none-any.whl (18 kB)
Downloaded feedparser-6.0.11-py3-none-any.whl (81 kB)
                                                81.3/81.3 kB 5.2 MB/s eta 0:00:00
Downloaded tldextract-5.1.3-py3-none-any.whl (104 kB)
                                                104.9/104.9 kB 7.8 MB/s eta 0:00:00
Downloaded requests_file-2.1.0-py2.py3-none-any.whl (4.2 kB)
Building wheels for collected packages: tinysegmenter, feedfinder2, jieba3k, sgmlib3k
Building wheel for tinysegmenter (setup.py) ... done
Created wheel for tinysegmenter: filename=tinysegmenter-0.3-py3-none-any.whl
Stored in directory: /root/.cache/pip/wheels/c8/d6/6c/384f58df48c00b9a31d638e
Building wheel for feedfinder2 (setup.py) ... done
Created wheel for feedfinder2: filename=feedfinder2-0.0.4-py3-none-any.whl
Stored in directory: /root/.cache/pip/wheels/97/02/e7/a1ff1760e12bdbaab0ac824
Building wheel for jieba3k (setup.py) ... done
Created wheel for jieba3k: filename=jieba3k-0.35.1-py3-none-any.whl size=739
Stored in directory: /root/.cache/pip/wheels/7a/c4/0c/12a9a314ecac499456c4c3b
Building wheel for sgmlib3k (setup.py) ... done
Created wheel for sgmlib3k: filename=sgmlib3k-1.0.0-py3-none-any.whl size=6
Stored in directory: /root/.cache/pip/wheels/f0/69/93/a47e9d621be168e9e33c7c
Successfully built tinysegmenter feedfinder2 jieba3k sgmlib3k
Installing collected packages: tinysegmenter, sgmlib3k, jieba3k, feedparser, tldextract, newspaper3k

```

```
pip install streamlit_option_menu
```

Collecting streamlit\_option\_menu

```

    Downloading streamlit_option_menu-0.4.0-py3-none-any.whl.metadata (2.5 kB)
Requirement already satisfied: streamlit>=1.36 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: altair<6,>=4.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: blinker<2,>=1.0.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: cachetools<6,>=4.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: click<9,>=7.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: numpy<3,>=1.23 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: packaging<25,>=20 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: pandas<3,>=1.4.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: pillow<12,>=7.1.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: protobuf<6,>=3.20 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: pyarrow>=7.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: requests<3,>=2.27 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: rich<14,>=10.14.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: tenacity<10,>=8.1.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: toml<2,>=0.10.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: typing-extensions<5,>=4.3.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: watchdog<7,>=2.1.5 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: gitpython!=3.1.19,<4,>=3.0.7 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: pydeck<1,>=0.8.0b4 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: tornado<7,>=6.0.3 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: jinja2 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: jsonschema>=3.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: narwhals>=1.14.2 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: gitdb<5,>=4.0.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: python-dateutil>=2.8.2 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: pytz>=2020.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: tzdata>=2022.7 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: markdown-it-py>=2.2.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: pygments<3.0.0,>=2.13.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: smmap<6,>=3.0.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: MarkupSafe>=2.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: attrs>=22.2.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: jsonschema-specifications>=2023.03.6 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: referencing>=0.28.4 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: rpds-py>=0.7.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: mdurl~0.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.10/dist-packages
Downloaded streamlit_option_menu-0.4.0-py3-none-any.whl (829 kB)
```

## 2025-04-09

- Colab Data Science Agent [launched](#)!
- Julia language runtimes available with GPU and TPU support [GitHub](#).
- Now your popular Kaggle datasets are cached for quick retrieval.
- Upgraded Colab runtimes to Python 3.11.

### Python package upgrades

- bigframes 1.29.0 -> 1.42.0
- TensorFlow 2.17.1 -> 2.18.0
- tensorboard 2.17.1 -> 2.18.0
- keras 3.5.0 -> 3.8.0
- torch 2.5.1 -> 2.6.0
- torchaudio 2.5.1 -> 2.6.0
- torchvision 0.20.1 -> 0.21.0
- fastai 2.7.18 -> 2.7.19
- ipykernel 5.5.6 -> 6.17.1
- google-genai 0.3.0 -> 1.9.0
- google-auth 2.27.0 -> 2.38.0
- Tornado 6.3.3 -> 6.4.2
- jax 0.4.33 -> 0.5.2
- accelerate 1.2.1 -> 1.5.2
- transformers 4.47.1 -> 4.50.3
- openai 1.57.4 -> 1.70.0
- kagglehub 0.3.6 -> 0.3.11
- earthengine-api 1.4.3 -> 1.5.9
- google-cloud-bigquery 3.29.0 -> 3.31.0
- bqquery-magics 0.8.1 -> 0.9.0
- NumPy 1.26.4 -> 2.0.2

### Python package inclusions

- cuml-cu12 24.12.0

## 2025-01-13

- Released version 1.2.0 of the ([Open in Colab Chrome Extension](#)).
- Released minimizable comments with indicators next to cell.
- TPU v5e-1 Runtimes are now available for selection ([tweet](#)).
- GPU prices were decreased ([tweet](#)).

### Python package upgrades

- accelerate 1.1.1 -> 1.2.1
- aiohttp 3.10.10 -> 3.11.11
- altair 4.2.2 -> 5.5.0
- bigframes 1.25.0 -> 1.29.0
- cmake 3.30.5 -> 3.31.2
- cvxpy 1.5.3 -> 3.6.0
- earthengine-api 1.2.0 -> 1.4.3
- folium 0.18.0 -> 0.19.3
- holidays 0.60 -> 0.63
- huggingface-hub 0.26.2 -> 0.27.0
- jsonpickle 3.4.2 -> 4.0.1
- kagglehub 0.3.3 -> 0.3.6
- keras 3.4.1 -> 3.5.0
- matplotlib 3.8.0 -> 3.10.0
- openai 1.54.3 -> 1.57.4
- pymc 5.18.0 -> 5.19.1
- safetensors 0.4.5 -> 0.5.0
- scikit-image 0.24.0 -> 0.25.0
- scikit-learn 1.5.2 -> 1.6.0
- sentence-transformers 3.2.1 -> 3.3.1
- tensorflow 2.17.0 -> 2.17.1
- torch 2.5.0 -> 2.5.1
- torchaudio 2.5.0 -> 2.5.1
- torchvision 0.20.0 -> 0.20.1
- transformers 4.46.2 -> 4.47.1
- wandb 0.18.6 -> 0.19.1
- xarray 2024.10.0 -> 2024.11.0

### Python package inclusions

- google-genai 0.3.0

## 2024-11-11

- Users can now import Gemini API keys from AI Studio into their user secrets, all in Colab ([tweet](#)).
- Increased limit to 1000 characters for requests to Gemini in Chat and Generate windows.
- Improved saving notebook to GitHub flow.
- Updated Gemini spark icon to be colorful.

829.3/829.3 kB 12.9 MB/s eta 0:00:00  
 Installing collected packages: streamlit\_option\_menu  
 Successfully installed streamlit\_option\_menu-0.4.0

- [uv](#) is pre-installed on the PATH for faster package installs.
- Fixed bugs
  - Dropdown text for GitHub repository not visible [#4901](#).
  - Pre-installed California housing dataset README not correct [#4862](#).
  - Backend execution error for scheduled notebook [#4850](#).
  - Drive File Stream issues [#3441](#).
  - Linking to the signup page does not preserve the authuser parameter.
  - Error messages in Gemini chat are not polished.
  - Clicking in Gemini chat feedback causes jitters the UI.
  - Hovering over a table of contents entry would show the menu icons for all entries.
  - Surveys display over open dialogs.
  - Playground mode banner not shown on mobile.

pip install translators

Collecting translators  
 Downloading translators-5.9.3-py3-none-any.whl.metadata (68 kB) 68.9/68.9 kB 3.5 MB/s eta 0:00:00  
 Requirement already satisfied: requests>=2.29.0 in /usr/local/lib/python3.10/dist  
 Collecting PyExecJS>=1.5.1 (from translators)  
 Downloading PyExecJS-1.5.1.tar.gz (13 kB)  
 Preparing metadata (setup.py) ... done  
 Requirement already satisfied: lxml>=4.9.1 in /usr/local/lib/python3.10/dist-pack  
 Requirement already satisfied: tqdm>=4.65.0 in /usr/local/lib/python3.10/dist-pack  
 Collecting pathos>=0.2.9 (from translators)  
 Downloading pathos-0.3.3-py3-none-any.whl.metadata (11 kB)  
 Requirement already satisfied: cryptography>=42.0.4 in /usr/local/lib/python3.10/c  
 Requirement already satisfied: cffi>=1.12.0 in /usr/local/lib/python3.10/dist-pack  
 Collecting ppft>=1.7.6.9 (from pathos>=0.2.9->translators)  
 Downloading ppft-1.7.6.9-py3-none-any.whl.metadata (12 kB)  
 Collecting dill>=0.3.9 (from pathos>=0.2.9->translators)  
 Downloading dill-0.3.9-py3-none-any.whl.metadata (10 kB)  
 Collecting pox>=0.3.5 (from pathos>=0.2.9->translators)  
 Downloading pox-0.3.5-py3-none-any.whl.metadata (8.0 kB)  
 Collecting multiprocess>=0.70.17 (from pathos>=0.2.9->translators)  
 Downloading multiprocess-0.70.17-py310-none-any.whl.metadata (7.2 kB)  
 Requirement already satisfied: six>=1.10.0 in /usr/local/lib/python3.10/dist-pack  
 Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3  
 Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.10/dist-pac  
 Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.10/di  
 Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.10/di  
 Requirement already satisfied: pycparser in /usr/local/lib/python3.10/dist-package  
 Downloading translators-5.9.3-py3-none-any.whl (56 kB) 56.9/56.9 kB 3.9 MB/s eta 0:00:00  
 Downloading pathos-0.3.3-py3-none-any.whl (82 kB) 82.1/82.1 kB 4.0 MB/s eta 0:00:00  
 Downloading dill-0.3.9-py3-none-any.whl (119 kB) 119.4/119.4 kB 8.6 MB/s eta 0:00:00  
 Downloading multiprocess-0.70.17-py310-none-any.whl (134 kB) 134.8/134.8 kB 6.1 MB/s eta 0:00:00  
 Downloading pox-0.3.5-py3-none-any.whl (29 kB)  
 Downloading ppft-1.7.6.9-py3-none-any.whl (56 kB) 56.8/56.8 kB 3.8 MB/s eta 0:00:00  
 Building wheels for collected packages: PyExecJS  
 Building wheel for PyExecJS (setup.py) ... done  
 Created wheel for PyExecJS: filename=PyExecJS-1.5.1-py3-none-any.whl size=14576  
 Stored in directory: /root/.cache/pip/wheels/9d/91/30/28e6da53d4f44dc445349b2ff:  
 Successfully built PyExecJS  
 Installing collected packages: PyExecJS, ppft, pox, dill, multiprocess, pathos, t  
 Successfully installed PyExecJS-1.5.1 dill-0.3.9 multiprocess-0.70.17 pathos-0.3.:

#### Python package upgrades

- accelerate 0.34.2 → 1.1.1
- arviz 0.19.0 → 0.20.0
- bigframes 1.18.0 → 1.25.0
- bigquery-magics 0.2.0 → 0.4.0
- bokeh 3.4.3 → 3.6.1
- blosc 2.0.0 → 2.7.1
- cloudpickle 2.2.1 → 3.1.0
- cudf-cu12 24.4.1 → 24.10.0
- dask 2024.8.0 → 24.10.0
- debugpy 1.6.6 → 1.8.0
- earthengine-api 1.0.0 → 1.2.0
- folium 0.17.0 → 0.18.0
- gscfs 2024.6.1 → 2024.10.0
- geemap 0.34.3 → 0.35.1
- holidays 0.57 → 0.60
- huggingface-hub 0.24.7 → 0.26.2
- kagglehub 0.3.0 → 0.3.3
- lightgbm 4.4.0 → 4.5.0
- lxml 4.9.4 → 5.3.0
- matplotlib 3.7.1 → 3.8.0
- mizani 0.11.4 → 0.13.0
- networkx 3.3 → 3.4.2
- nltk 3.8.1 → 3.9.1
- pandas 2.1.4 → 2.2.2
- pillow 10.4.0 → 11.0.0
- plotnine 0.13.6 → 0.14.1
- polars 1.6.0 → 1.9.0
- protobuf 3.20.3 → 4.25.5
- pyarrow 14.0.2 → 17.0.0
- pydrive2 1.20.0 → 1.21.1
- pymc 5.16.2 → 5.18.0
- torch 2.4.1 → 2.5.0
- torchaudio 2.4.1 → 2.5.0
- torchvision 0.19.1 → 0.20.0
- transformers 4.44.2 → 4.46.2
- xarray 2024.9.0 → 2024.10.0

#### Python package inclusions

- diffusers 0.31.0
- gitpython 3.1.43
- langchain 0.3.7
- openai 1.54.3
- pygit2 1.16.0
- pyspark 3.5.3
- sentence-transformers 3.2.1
- timm 1.0.11
- wandb 0.18.6

#### Library and driver upgrades

- drives upgraded from 89.0.2 to 98.0.0

#### 2024-09-23

- Improved code snippet search
- Updated Marketplace image and public local runtime container
- Improved the look-and-feel of interactive form dropdowns and checkboxes
- Fixed bugs
  - activating the skip link caused the notebook to scroll out of view
  - toggling a checkbox too much caused the page to crash

pip install matplotlib-venn

Requirement already satisfied: matplotlib-venn in /usr/local/lib/python3.10/dist-pa  
 Requirement already satisfied: matplotlib in /usr/local/lib/python3.10/dist-pa  
 Requirement already satisfied: numpy in /usr/local/lib/python3.10/dist-packages (<  
 Requirement already satisfied: scipy in /usr/local/lib/python3.10/dist-packages (<  
 Requirement already satisfied: contourpy>=1.0.1 in /usr/local/lib/python3.10/dist  
 Requirement already satisfied: cycler>=0.10 in /usr/local/lib/python3.10/dist-pac  
 Requirement already satisfied: fonttools>=4.22.0 in /usr/local/lib/python3.10/dist  
 Requirement already satisfied: kiwisolver>=1.0.1 in /usr/local/lib/python3.10/dist  
 Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.10/dist-p  
 Requirement already satisfied: pillow>=6.2.0 in /usr/local/lib/python3.10/dist-pac  
 Requirement already satisfied: pyparsing>=2.3.1 in /usr/local/lib/python3.10/dist  
 Requirement already satisfied: python-dateutil>=2.7 in /usr/local/lib/python3.10/d  
 Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.10/dist-packages:

!pip install vaderSentiment

Collecting vaderSentiment  
 Downloading vaderSentiment-3.3.2-py2.py3-none-any.whl.metadata (572 bytes)  
 Requirement already satisfied: requests in /usr/local/lib/python3.10/dist-package:  
 Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3  
 Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.10/dist-pac  
 Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.10/di  
 Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.10/di

```
Downloading vaderSentiment-3.3.2-py2.py3-none-any.whl (125 kB)
  126.0/126.0 kB 2.2 MB/s eta 0:00:00
Installing collected packages: vaderSentiment
Successfully installed vaderSentiment-3.3.2
```

- lightning fast drags could cause orphaned tabs
- custom widgets snippet would show for local runtimes

```
pip install auth
```

```
→ Collecting auth
  Downloading auth-0.5.3-py3-none-any.whl.metadata (7.6 kB)
Requirement already satisfied: blinker in /usr/local/lib/python3.10/dist-packages
Collecting eventlet (from auth)
  Downloading eventlet-0.38.2-py3-none-any.whl.metadata (5.5 kB)
Collecting falcon (from auth)
  Downloading falcon-4.0.2-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64
Collecting gunicorn (from auth)
  Downloading gunicorn-23.0.0-py3-none-any.whl.metadata (4.4 kB)
Collecting mongoengine (from auth)
  Downloading mongoengine-0.29.1-py3-none-any.whl.metadata (6.7 kB)
Requirement already satisfied: requests in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: werkzeug in /usr/local/lib/python3.10/dist-packages
Collecting dnspython>=1.15.0 (from eventlet->auth)
  Downloading dnspython-2.7.0-py3-none-any.whl.metadata (5.8 kB)
Requirement already satisfied: greenlet>=1.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: packaging in /usr/local/lib/python3.10/dist-packages
Collecting pymongo<5.0,>=3.4 (from mongoengine->auth)
  Downloading pymongo-4.10.1-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64
Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: MarkupSafe>=2.1.1 in /usr/local/lib/python3.10/dist-packages
Downloading auth-0.5.3-py3-none-any.whl (14 kB)
Downloading eventlet-0.38.2-py3-none-any.whl (363 kB)
  363.2/363.2 kB 12.3 MB/s eta 0:00:00
Downloading falcon-4.0.2-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl
  10.5/10.5 kB 29.8 MB/s eta 0:00:00
Downloading gunicorn-23.0.0-py3-none-any.whl (85 kB)
  85.0/85.0 kB 6.4 MB/s eta 0:00:00
Downloading mongoengine-0.29.1-py3-none-any.whl (112 kB)
  112.4/112.4 kB 4.6 MB/s eta 0:00:00
Downloading dnspython-2.7.0-py3-none-any.whl (313 kB)
  313.6/313.6 kB 19.6 MB/s eta 0:00:00
Downloading pymongo-4.10.1-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64
  1.4/1.4 kB 42.0 MB/s eta 0:00:00
Installing collected packages: gunicorn, falcon, dnspython, pymongo, eventlet, mongoengine, auth
Successfully installed auth-0.5.3 dnspython-2.7.0 eventlet-0.38.2 falcon-4.0.2 gunicorn-23.0.0 mongoengine-0.29.1 pymongo-4.10.1
```

```
pip install textblob
```

```
→ Requirement already satisfied: textblob in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: nltk>=3.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: click in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: joblib in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: regex>=2021.8.3 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: tqdm in /usr/local/lib/python3.10/dist-packages
```

```
pip install nltk
```

```
→ Requirement already satisfied: nltk in /usr/local/lib/python3.10/dist-packages (3.2.5)
Requirement already satisfied: click in /usr/local/lib/python3.10/dist-packages (1.1.0)
Requirement already satisfied: joblib in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: regex>=2021.8.3 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: tqdm in /usr/local/lib/python3.10/dist-packages
```

```
pip install transformers
```

```
→ Requirement already satisfied: transformers in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: filelock in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: huggingface-hub<1.0,>=0.24.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: numpy>=1.17 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: pyyaml>=5.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: regex!=2019.12.17 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: requests in /usr/local/lib/python3.10/dist-packages
```

## Python package upgrades

- accelerate 0.32.1 -> 0.34.2
- arviz 0.18.0 -> 0.19
- autograd 1.6.2 -> 1.7.0
- bigframes 1.14.0 -> 1.18.0
- dask 2024.7.1 -> 2024.8.0
- distributed 2024.7.1 -> 2024.8.0
- duckdb 0.10.3 -> 1.1.0
- earthengine-api 0.1.416 -> 1.0.0
- flax 0.8.4 -> 0.8.5
- gdown 5.1.0 -> 5.2.0
- geemap 0.33.1 -> 0.34.3
- geopandas 0.14.4 -> 1.0.1
- google-cloud-aiplatform 1.59.0 -> 1.67.1
- google-cloud-bigquery-storage 2.25.0 -> 2.26.0
- holidays 0.54 -> 0.57
- huggingface-hub 0.23.5 -> 0.24.7
- ibis-framework 8.0.0 -> 9.2.0
- jax 0.4.26 -> 0.4.33
- jaxlib 0.4.26 -> 0.4.33
- kagglehub 0.2.9 -> 0.3.0
- lightgbm 4.4.0 -> 4.5.0
- matplotlib-venn 0.11.10 -> 1.1.1
- mizani 0.9.3 -> 0.11.4
- Pillow 9.4.0 -> 10.4.0
- plotly 5.15.0 -> 5.24.1
- plotnine 0.12.4 -> 0.13.6
- polars 0.20.2 -> 1.6.0
- progressbar2 4.2.0 -> 4.5.0
- PyDrive2 1.6.3 -> 1.20.0
- pymc 5.10.4 -> 5.16.2
- pytensor 2.18.6 -> 2.25.4
- scikit-image 0.23.2 -> 0.24.0
- scikit-learn 1.3.2 -> 1.5.2
- torch 2.3.1 -> 2.4.1
- torchaudio 2.3.1 -> 2.4.1
- torchvision 0.18.1 -> 0.19.1
- transformers 4.42.4 -> 4.44.2
- urllib3 2.0.7 -> 2.2.3
- xarray 2024.6.0 -> 2024.9.0

## Python package inclusions

- bqplot-magics 0.2.0

## 2024-08-20

- TPU memory usage and utilization can now be checked with !tpu-info
- Gemini Chat responses are now grounded in relevant sources
- Added a new "Create Gemini API key" link in the user secrets panel
- Added a new "Gemini: Creating a prompt" snippet and touched up the existing "Gemini: Connecting to Gemini" snippet
- Added the ability to specify custom placeholder text for various interactive form params (see [examples](#))
- Keyboard navigation a11y improvements to comments UI
- Various minor rendering improvements to interactive forms UI
- A11y improvements for the run button and header
- Updated tooltip styling
- A11y improvements for the file browser's disk usage bar
- On mobile, tooltips now trigger on long press
- On mobile, release notes updates will no longer display automatically
- Python package upgrades
  - astropy 5.3.4 -> 6.1.2
  - bigframes 1.11.1 -> 1.14.0
  - bokeh 3.3.4 -> 3.4.3
  - dask 2023.8.1 -> 2024.7.1
  - earthengine-api 0.1.412 -> 0.1.416
  - geopandas 0.13.2 -> 0.14.4
  - kagglehub 0.2.8 -> 0.2.9

```
Requirement already satisfied: tokenizers<0.22,>=0.21 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: safetensors>=0.4.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: tqdm>=4.27 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: fsspec>=2023.5.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: typing-extensions>=3.7.4.3 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.10/dist-packages
```

```
pip install HfApi
```

### Collecting HfApi

```
  Downloading hfapi-0.1b0-py3-none-any.whl.metadata (2.0 kB)
Requirement already satisfied: requests in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: aiohttp in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: pydantic in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: aiohappyeyeballs>=2.3.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: aiosignal>=1.1.2 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: asyncio-timeout<6.0,>=4.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: attrs>=17.3.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: frozenlist>=1.1.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: multidict<7.0,>=4.5 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: propcache>=0.2.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: yarl<2.0,>=1.17.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: annotated-types>=0.6.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: pydantic-core==2.27.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: typing-extensions>=4.12.2 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.10/dist-packages
  Downloading hfapi-0.1b0-py3-none-any.whl (14 kB)
Installing collected packages: HfApi
Successfully installed HfApi-0.1b0
```

```
!pip install --upgrade transformers
```

```
Requirement already satisfied: transformers in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: filelock in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: huggingface-hub<1.0,>=0.24.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: numpy>=1.17 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: pyyaml>=5.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: regex!=2019.12.17 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: requests in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: tokenizers<0.22,>=0.21 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: safetensors>=0.4.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: tqdm>=4.27 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: fsspec>=2023.5.0 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: typing-extensions>=3.7.4.3 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.10/dist-packages
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.10/dist-packages
```

```
from huggingface_hub import HfApi

hf_api = HfApi()
models = hf_api.list_models()

from huggingface_hub import HfApi, list_models

# Use root method
models = list_models()

# Or configure a HfApi client
hf_api = HfApi(
    endpoint="https://huggingface.co", # Can be a Private Hub endpoint.
    token="hf_xxx", # Token is not persisted on the machine.
)
models = hf_api.list_models()
```

- keras 2.15.0 -> 3.4.1
- lightgbm 4.1.0 -> 4.4.0
- malloy 2023.1067 -> 2024.1067
- numba 0.58.1 -> 0.60.0
- numpy 1.25.2 -> 1.26.4
- opencv-python 4.8.0.76 -> 4.10.0.84
- pandas 2.0.3 -> 2.1.4
- pandas-gbq 0.19.2 -> 0.23.1
- panel 1.3.8 -> 1.4.5
- requests 2.31.0 -> 2.32.3
- scikit-learn 1.2.2. -> 1.3.2
- scipy 1.11.4 -> 1.13.1
- tensorboard 2.15.2 -> 2.17.0
- tensorflow 2.15.0 -> 2.17.0
- tf-keras 2.15.1 -> 2.17.0
- xarray 2023.7.0 -> 2024.6.0
- xgboost 2.0.3 -> 2.1.1
- Python package inclusions
  - einops 0.8.0

## 2024-07-22

- You can now embed Google sheets directly into Colab to streamline interactions with data with InteractiveSheet.

Example:

```
from google.colab import sheets
sh = sheets.InteractiveSheet()
df = sh.as_df()
```

- Fixed multiple rendering bugs in cell editors with wide text content (i.e. text is no longer hidden or clipped)
- Fixed multiple accessibility issues in Colab's comments feature (e.g. proper keyboard focus management, added accessibility landmarks, etc)
- Fixed bug where AI code generation would fail for extremely long broken code snippets
- Fixed multiple scrollbar bugs in the user secrets panel
- Added the ability for workspace admin to purchase Colab Pro and Pro+ Subscriptions for users
- Fixed bug where user secrets couldn't be moved to a tab
- Fixed several focus management accessibility issues in tabs, the table of contents, the left toolbar, and the run button
- Fixed bug where overflowing cells may be omitted when pasting from Google Sheets
- Fixed bug where the generate code button did not activate on touch
- Python package upgrades
  - bigframes 1.9.0 -> 1.11.1
  - cvxpy 1.3.4 -> 1.5.2
  - earthengine-api 0.1.408 -> 0.1.412
  - google-api-core 2.11.1 -> 2.19.1
  - google-api-python-client 2.84.0 -> 2.137.0
  - google-cloud-aiplatform 1.56.0 -> 1.59.0
  - google-cloud-bigquery 3.21.0 -> 3.25.0
  - google-cloud-core 2.3.3 -> 2.4.1
  - google-cloud-datastore 2.15.2 -> 2.19.0
  - google-cloud-firebase 2.11.1 -> 2.16.1
  - google-cloud-functions 1.13.3 -> 1.16.4
  - google-generativeai 0.5.4 -> 0.7.2
  - kagglehub 0.2.5 -> 0.2.8
  - pip 23.1.2 -> 24.1.2
  - setuptools 67.7.2 -> 71.0.4
  - sympy 1.12.1 -> 1.13.1
  - torch 2.3.0 -> 2.3.1
  - transformers 4.41.2 -> 4.42.4
- Python package inclusions
  - accelerate 0.32.1

## 2024-06-18

- Inline AI completions are now available to users on the free-of-charge tier
- Reduced latency for LSP and terminal connections
- Improved quality of inline completions
- Visual improvements to switch controls across Colab

```
pip install emoji
Collecting emoji
  Downloading emoji-2.14.0-py3-none-any.whl.metadata (5.7 kB)
  Downloading emoji-2.14.0-py3-none-any.whl (586 kB)
    ━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 586.9/586.9 kB 12.6 MB/s eta 0:00:00
Installing collected packages: emoji
Successfully installed emoji-2.14.0
```

```
import emoji

from emoji import emojize

import nltk
nltk.download('vader_lexicon')

[nltk_data] Downloading package vader_lexicon to /root/nltk_data...
True
```

```
from importlib import util
from operator import index
import string
import streamlit as st
import pandas as pd
import _plotly_utils
import re
from collections import Counter
from PIL import Image
from wordcloud import WordCloud, STOPWORDS, ImageColorGenerator
```

```
from streamlit_option_menu import option_menu
import altair as alt
import translators as ts
import plotly.graph_objs as go
from scipy import stats
from vaderSentiment.vaderSentiment import SentimentIntensityAnalyzer
import matplotlib
import matplotlib.pyplot as plt
import seaborn as sns
import warnings
import auth

2024-12-31 06:12:53.478 WARNING streamlit.runtime.scriptrunner_utils.script_run_c
/usr/local/lib/python3.10/dist-packages/auth/__init__.py:3: DeprecationWarning: Ca:
  from auth.CAS.REST.service import api
```

```
warnings.simplefilter(action='ignore')
```

## WHATASAPP GROUP CHAT SENTIMENTAL ANALYSIS

```
from transformers import pipeline
sentiment_pipeline = pipeline("sentiment-analysis")
data = ["I Love You", "I Hate You"]
sentiment_pipeline(data)

No model was supplied, defaulted to distilbert/distilbert-base-uncased-finetuned-:
Using a pipeline without specifying a model name and revision in production is not
config.json: 100% 629/629 [00:00<00:00, 31.4kB/s]
model.safetensors: 100% 268M/268M [00:02<00:00, 155MB/s]
tokenizer_config.json: 100% 48.0/48.0 [00:00<00:00, 2.25kB/s]
vocab.txt: 100% 232k/232k [00:00<00:00, 2.75MB/s]
Device set to use cpu
[{'label': 'POSITIVE', 'score': 0.9998656511306763},
 {'label': 'NEGATIVE', 'score': 0.9991129040718079}]
```

- Various bug fixes, performance and a11y improvements to the user secrets panel
- Improved tooltip UX behavior
- Improved behavior when copying data from Google Sheets and pasting in Colab
- Scroll to cell fixes for single tabbed view and jump to cell command
- Improved tab header behavior
- A11y improvements for notebook-focused cells
- Python package upgrades
  - torch 2.2.1 -> 2.3.0
  - torchaudio 2.2.1 -> 2.3.0
  - torchvision 0.17.1 -> 0.18.0
  - torchtext 0.17.1 -> 0.18.0
  - google-cloud-aiplatform 1.51.0 -> 1.56.0
  - bigframes 1.5.0 -> 1.8.0
  - regex 2023.12.25 -> 2024.5.15

### 2024-05-13

- Code actions are now supported to automatically improve and refactor code. Code actions can be triggered by the keyboard shortcut "Ctrl/⌘ + ."
- Python package upgrades
  - bigframes 1.0.0 -> 1.5.0
  - google-cloud-aiplatform 1.47.0 -> 1.51.0
  - jax[tpu] 0.4.23 -> 0.4.26
- Python package inclusions
  - cudf 24.4.1

### 2024-04-15

- TPU v2 runtime is now available
- L4 runtime is now available for paid users
- New distributed fine-tuning Gemma tutorial on TPUs ([GitHub](#))
- Symbol rename is now supported with keyboard shortcut F2
- Fixed bug causing inability to re-upload deleted files
- Fixed breaking bug in colabtools %upload\_files\_async
- Added syntax highlighting to %%writefile cells
- Cuda dependencies that come with Torch are cached for faster downloads for packages that require Torch and its dependencies ([GitHub issue](#))
- Python package upgrades
  - bigframes 0.24.0 -> 1.0.0
  - duckdb 0.9.2 -> 0.10.1
  - google-cloud-aiplatform 1.43.0 -> 1.47.0
  - jax 0.4.23 -> 0.4.26

### 2024-03-13

- Fixed bug that sometimes caused UserSecrets to move / disappear
- Improved messaging for mounting drive in an unsupported environment ([GitHub issue](#))
- Python package upgrades
  - torch 2.1.0 -> 2.2.1
  - torchaudio 2.1.0 -> 2.2.1
  - torchvision 0.16.0 -> 0.17.1
  - torchtext 0.16.0 -> 0.17.1
  - PyMC 5.7.2 -> 5.10.4
  - BigFrames 0.21.0 -> 0.24.0
  - google-cloud-aiplatform 1.42.1 -> 1.43.0
  - tornado 6.3.2 -> 6.3.3

### 2024-02-21

- Try out Gemma on [Colab!](#)
- Allow unicode in form text inputs
- Display documentation and link to source when displaying functions
- Display image-like ndarrays as images
- Improved UX around quick charts and execution error suggestions

```

import re

def date_time(s):
    pattern = r'^(\d{1,2})/(\d{1,2})/(\d{2,4}), (\d{1,2}):(\d{2}) ?(AM|PM|am|pm)? -'
    result = re.match(pattern, s)
    if result:
        return True
    return False

# Extract contacts
def find_sender(s):
    s = s.split(":")
    if len(s) == 2:
        return True
    else:
        return False

# Extract Message
def get_message(line):
    split_line = line.split(' - ')
    date_time = split_line[0]
    date, time, _, _ = re.match(r'^(\d{1,2})/(\d{1,2})/(\d{2,4}), (\d{1,2}):(\d{2})', date_time)
    message = " ".join(split_line[1:])

    if find_sender(message):
        split_message = message.split(": ")
        sender = split_message[0]
        message = split_message[1]
    else:
        sender = 'None'
    return date, time, sender, message

import re

# Define your date_time and get_message functions here

data = []
conversation_file = '/content/sathi.txt'

with open(conversation_file, encoding="utf-8") as fp:
    fp.readline() # Skip the first line if necessary
    message_buffer = []
    date, time, sender = None, None, None

    while True:
        line = fp.readline()
        if not line:
            break
        line = line.strip()

        if date_time(line):
            if message_buffer:
                message_text = ' '.join(message_buffer)
                data.append([date, time, sender, message_text])
                message_buffer.clear()

            date, time, sender, message = get_message(line)
            message_buffer.append(message)
        else:
            message_buffer.append(line)

    # Append the last message in the conversation
    if message_buffer:
        message_text = ' '.join(message_buffer)
        data.append([date, time, sender, message_text])

import pandas as pd
from nltk.sentiment.vader import SentimentIntensityAnalyzer

# Read WhatsApp chat text from file
with open('/content/sathi.txt', 'r', encoding='utf-8') as file:
    chat_text = file.readlines()

# Extracting date, time, sender, and message from chat text
data = []

```

- Released Marketplace image for the month of February ([GitHub issue](#))
- Python package upgrades
  - bigframes 0.19.2 -> 0.21.0
  - regex 2023.6.3 -> 2023.12.25
  - spacy 3.6.1 -> 3.7.4
  - beautifulsoup4 4.11.2 -> 4.12.3
  - tensorflow-probability 0.22.0 -> 0.23.0
  - google-cloud-language 2.9.1 -> 2.13.1
  - google-cloud-aiplatform 1.39.0 -> 1.42.1
  - transformers 4.35.2 -> 4.37.2
  - pyarrow 10.0.1 -> 14.0.2

## 2024-01-29

- New [Kaggle Notebooks <-> Colab updates!](#) Now you can:
  - Import directly from Colab without having to download/re-upload
  - Upload via link, by pasting Google Drive or Colab URLs
  - Export & run Kaggle Notebooks on Colab with 1 click
- Try these notebooks that talk to Gemini:
  - [Gemini and Stable Diffusion](#)
  - [Learning with Gemini and ChatGPT](#)
  - [Talk to Gemini with Google's Speech to Text API](#)
  - [Sell lemonade with Gemini and Sheets](#)
  - [Generate images with Gemini and Vertex](#)
- Python package upgrades
  - google-cloud-aiplatform 1.38.1 -> 1.39.0
  - bigframes 0.18.0 -> 0.19.2
  - polars 0.17.3 -> 0.20.2
  - gdown 4.6.6 -> 4.7.3 ([GitHub issue](#))
  - tensorflow-hub 0.15.0 -> 0.16.0
  - flax 0.7.5 -> 0.8.0
- Python package inclusions
  - sentencepiece 0.1.99

## 2024-01-08

- Avoid nested scrollbars for large outputs by using `google.colab.output.no_vertical_scroll()` ([Example notebook](#))
- Fix [bug](#) where downloading models from Hugging Face could freeze
- Python package upgrades
  - huggingface-hub 0.19.4 -> 0.20.2
  - bigframes 0.17.0 -> 0.18.0

## 2023-12-18

- Expanded access to AI coding has arrived in Colab across 175 locales for all tiers of Colab users
- Improvements to display of ML-based inline completions (for eligible Pro/Pro+ users)
- Started a series of [notebooks](#) highlighting Gemini API capabilities
- Enable ⌘/Ctrl+L to select the full line in an editor
- Fixed [bug](#) where we weren't correctly formatting output from multiple execution results
- Python package upgrades
  - CUDA 11.8 to CUDA 12.2
  - tensorflow 2.14.0 -> 2.15.0
  - tensorboard 2.14.0 -> 2.15.0
  - keras 2.14.0 -> 2.15.0
  - Nvidia drivers 525.105.17 -> 535.104.05
  - tensorflow-gcs-config 2.14.0 -> 2.15.0
  - bigframes 0.13.0 -> 0.17.0
  - geemap 0.28.2 -> 0.29.6
  - pyarrow 9.0.0 -> 10.0.1
  - google-generativeai 0.2.2 -> 0.3.1
  - jax 0.4.20 -> 0.4.23
  - jaxlib 0.4.20 -> 0.4.23
- Python package inclusions
  - kagglehub 0.1.4
  - google-cloud-aiplatform 1.38.1

```

for message in chat_text:
    # Check if the message follows the expected format
    if ":" in message:
        date_time, content = message.split(" - ")
        date, time = date_time.split(", ")
        sender, text = content.split(": ", 1) # Split at the first occurrence of ": "
        data.append([date, time, sender, text])

# Creating a DataFrame from the extracted data
df = pd.DataFrame(data, columns=["Date", "Time", "Sender", "Message"])

# Initializing SentimentIntensityAnalyzer
sentiments = SentimentIntensityAnalyzer()

# Calculating sentiment scores and adding them as new columns in the DataFrame
df["Positive"] = [sentiments.polarity_scores(message)["pos"] for message in df["Message"]]
df["Negative"] = [sentiments.polarity_scores(message)["neg"] for message in df["Message"]]
df["Neutral"] = [sentiments.polarity_scores(message)["neu"] for message in df["Message"]]

# Displaying the DataFrame as a table in Google Colab
df.head(30) # This will display the first few rows of the DataFrame as a table in Colab

```

|    | Date     | Time     | Sender | Message   | Positive | Negative | Neutral |
|----|----------|----------|--------|---|----------|----------|---------|
| 0  | 24/11/23 | 11:53 am | Suhani | Ayee ronak hum<br>tere muh pe thapad<br>mar dengel\n    | 0.000    | 0.0      | 1.000   |
| 1  | 24/11/23 | 11:53 am | Suhani | Photos bhej de\n  | 0.000    | 0.0      | 1.000   |
| 2  | 24/11/23 | 11:53 am | Suhani | Sari\n  | 0.000    | 0.0      | 1.000   |
| 3  | 24/11/23 | 11:53 am | Suhani | Y       \n  | 0.000    | 0.0      | 1.000   |
| 4  | 24/11/23 | 11:54 am | Ritul  | Aeee hossiyarr<br>ronak photo bej chl<br>chmn sii\n     | 0.000    | 0.0      | 1.000   |
| 5  | 24/11/23 | 11:55 am | Suhani | Haa yll dekh<br>preshan mt kr<br>aise\n                 | 0.000    | 0.0      | 1.000   |
| 6  | 25/11/23 | 1:01 pm  | Suhani | Y       \n yeah<br>kya batt hu\n                        | 0.355    | 0.0      | 0.645   |
| 7  | 25/11/23 | 1:01 pm  | Suhani | Ronak na to tu phn<br>uthari\n                          | 0.000    | 0.0      | 1.000   |
| 8  | 25/11/23 | 1:01 pm  | Suhani | Na hee pics bhjr\n                                      | 0.000    | 0.0      | 1.000   |
| 9  | 25/11/23 | 1:01 pm  | Suhani | Dekh yll kaise<br>keri\n                                | 0.000    | 0.0      | 1.000   |
| 10 | 25/11/23 | 1:01 pm  | Suhani | Ritul yo\n  | 0.000    | 0.0      | 1.000   |
| 11 | 25/11/23 | 1:52 pm  | Ritul  | Oo Bhai bejde<br>photos inhee\n                         | 0.000    | 0.0      | 1.000   |
| 12 | 25/11/23 | 1:53 pm  | Ritul  | Muje bhii\n   | 0.000    | 0.0      | 1.000   |
| 13 | 25/11/23 | 1:53 pm  | Suhani | Y       \n yeah<br>pitne vali\n                         | 0.423    | 0.0      | 0.577   |
| 14 | 25/11/23 | 1:53 pm  | Suhani | Or kuch nhi\n   | 0.000    | 0.0      | 1.000   |
| 15 | 27/11/23 | 12:51 pm | Suhani | Bhyiii ronak tune to<br>had kr di ylll\n                | 0.000    | 0.0      | 1.000   |
| 16 | 27/11/23 | 12:51 pm | Suhani | Call bhi nhi uthari<br>or na hee msg ka<br>reply keri\n | 0.000    | 0.0      | 1.000   |
| 17 | 27/11/23 | 12:51 pm | Suhani | Sach m\n  | 0.000    | 0.0      | 1.000   |
| 18 | 27/11/23 | 12:52 pm | Suhani | Rehne de ab<br>mughe cahiye bhi<br>nhi\n                | 0.000    | 0.0      | 1.000   |
| 19 | 29/11/23 | 6:45 pm  | Suhani | Y       \n Ritul q<br>add kia\n                         | 0.000    | 0.0      | 1.000   |
| 20 | 29/11/23 | 6:45 pm  | Suhani | Tune mughe\n  | 0.000    | 0.0      | 1.000   |

**2023-11-27**

- Removed warning when calling await to make it render as code
- Added "Run selection" to the cell context menu
- Added highlighting for the %%python cell magic
- Launched AI coding features for Pro/Pro+ users in more locales
- Python package upgrades
  - bigframes 0.12.0 -> 0.13.0
- Python package inclusions
  - transformers 4.35.2
  - google-generativeai 0.2.2

**2023-11-08**

- Launched Secrets, for safe storage of private keys on Colab ([tweet](#))
- Fixed issue where TensorBoard would not load ([#3990](#))
- Python package upgrades
  - lightgbm 4.0.0 -> 4.1.0
  - bigframes 0.10.0 -> 0.12.0
  - bokeh 3.2.2 -> 3.3.0
  - duckdb 0.8.1 -> 0.9.1
  - numba 0.56.4 -> 0.58.1
  - tweepy 4.13.0 -> 4.14.0
  - jax 0.4.16 -> 0.4.20
  - jaxlib 0.4.16 -> 0.4.20

**2023-10-23**

- Updated the **Open notebook** dialog for better usability and support for smaller screen sizes
- Added smart paste support for data from Google Sheets for R notebooks
- Enabled showing release notes in a tab
- Launched AI coding features for Pro/Pro+ users in Australia AU Canada CA India IN and Japan JP ([tweet](#))
- Python package upgrades
  - earthengine-api 0.1.357 -> 0.1.375
  - flax 0.7.2 -> 0.7.4
  - geemap 0.27.4 -> 0.28.2
  - jax 0.4.14 -> 0.4.16
  - jaxlib 0.4.14 -> 0.4.16
  - keras 2.13.1 -> 2.14.0
  - tensorboard 2.13.0 -> 2.14.1
  - tensorflow 2.13.0 -> 2.14.0
  - tensorflow-gcs-config 2.13.0 -> 2.14.0
  - tensorflow-hub 0.14.0 -> 0.15.0
  - tensorflow-probability 0.20.1 -> 0.22.0
  - torch 2.0.1 -> 2.1.0
  - torchaudio 2.0.2 -> 2.1.0
  - torchtext 0.15.2 -> 0.16.0
  - torchvision 0.15.2 -> 0.16.0
  - xgboost 1.7.6 -> 2.0.0
- Python package inclusions
  - bigframes 0.10.0
  - malloy 2023.1056

**2023-09-22**

- Added the ability to scope an AI generated suggestion to a specific Pandas dataframe ([tweet](#))
- Added Colab link previews to Docs ([tweet](#))
- Added smart paste support for data from Google Sheets
- Increased font size of dropdowns in interactive forms
- Improved rendering of the notebook when printing
- Python package upgrades
  - tensorflow 2.12.0 -> 2.13.0
  - tensorboard 2.12.3 -> 2.13.0
  - keras 2.12.0 -> 2.13.1
  - tensorflow-gcs-config 2.12.0 -> 2.13.
  - scipy 1.10.1 -> 1.11.2
  - cython 0.29.6 -> 3.0.2
- Python package inclusions
  - geemap 0.26.0

**2023-08-18**

```
x = df["Positive"].sum()
y = df["Negative"].sum()
z = df["Neutral"].sum()

def score(a, b, c):
    if a > b and a > c:
        return "Positive"
    elif b > a and b > c:
        return "Negative"
    elif c > a and c > b:
        return "Neutral"

sentiment = score(x, y, z)
print("Overall Sentiment:", sentiment)
```

Overall Sentiment: Neutral

```
df.Sender.unique()
```

array(['Suhani', 'Ritul', 'Moni Chaudhary', 'Ronak'], dtype=object)

```
media_messages = df[df['Message'] == 'ritul'].shape[1]
print(media_messages)
```

7

```
from google.colab import drive
drive.mount('/content/drive')
```

Mounted at /content/drive

```
import pandas as pd

# Open the WhatsApp chat text file and read the lines into a list
with open('/content/sathi.txt', 'r', encoding='utf-8') as file:
    chat_text = file.readlines()

# Create a DataFrame from the chat text
# Creating a DataFrame from the extracted data
df = pd.DataFrame(chat_text, columns=["Chat Text"])

# Initializing SentimentIntensityAnalyzer
sentiments = SentimentIntensityAnalyzer()

# Display the DataFrame as a table in Google Colab
display(df)
```

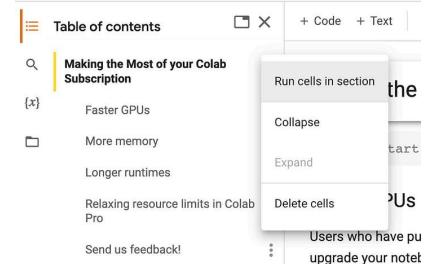
- Added "Change runtime type" to the menu in the connection button
- Improved auto-reconnection to an already running notebook ([#3764](#))
- Increased the specs of our highmem machines for Pro users
- Fixed add-apt-repository command on Ubuntu 22.04 runtime ([#3867](#))
- Python package upgrades
  - bokeh 2.4.3 -> 3.2.2
  - cmake 3.25.2 -> 3.27.2
  - cryptography 3.4.8 -> 41.0.3
  - dask 2022.12.1 -> 2023.8.0
  - distributed 2022.12.1 -> 2023.8.0
  - earthengine-api 0.1.358 -> 0.1.364
  - flax 0.7.0 -> 0.7.2
  - ipython-sql 0.4.0 -> 0.5.0
  - jax 0.4.13 -> 0.4.14
  - jaxlib 0.4.13 -> 0.4.14
  - lightgbm 3.3.5 -> 4.0.0
  - mkl 2019.0 -> 2023.2.0
  - notebook 6.4.8 -> 6.5.5
  - numpy 1.22.4 -> 1.23.5
  - opencv-python 4.7.0.72 -> 4.8.0.76
  - pillow 8.4.0 -> 9.4.0
  - plotly 5.13.1 -> 5.15.0
  - prettytable 0.7.2 -> 3.8.0
  - pytensor 2.10.1 -> 2.14.2
  - spacy 3.5.4 -> 3.6.1
  - statsmodels 0.13.5 -> 0.14.0
  - xarray 2022.12.0 -> 2023.7.0
- Python package inclusions
  - PyDrive2 1.6.3

## 2023-07-21

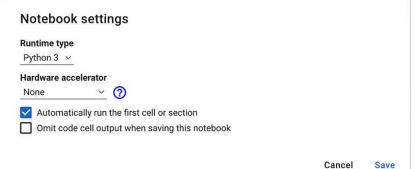
- Launched auto-plotting for dataframes, available using the chart button that shows up alongside datatables ([post](#))



- Added a menu to the table of contents to support running a section or collapsing/expanding sections ([post](#))



- Added an option to automatically run the first cell or section, available under Edit -> Notebook settings ([post](#))



- Launched Pro/Pro+ to Algeria, Argentina, Chile, Ecuador, Egypt, Ghana, Kenya, Malaysia, Nepal, Nigeria, Peru, Rwanda, Saudi Arabia, South Africa, Sri Lanka, Tunisia, and Ukraine ([tweet](#))
- Added a command, "Toggle tab moves focus" for toggling tab trapping in the editor (Tools -> Command palette, "Toggle tab moves focus")
- Fixed issue where files.upload() was sometimes returning an incorrect filename ([#1550](#))
- Fixed f-string syntax highlighting bug ([#3802](#))
- Disabled ambiguous characters highlighting for commonly used LaTeX characters ([#3648](#))
- Upgraded Ubuntu from 20.04 LTS to [22.04 LTS](#)

|    | Chat  | Text                            |
|----|---|---------------------------------|
| 0  | Date Time   | Contacts Messages \n            |
| 1  | 24/11/23, 11:53 am                                | - Suhani: Ayee ronak hum te...  |
| 2  | 24/11/23, 11:53 am                                | - Suhani: Photos bhej de\n      |
| 3  | 24/11/23, 11:53 am                                | - Suhani: Saril\n               |
| 4  | 24/11/23, 11:53 am                                | - Suhani: Y         ...         |
| 5  | 24/11/23, 11:54 am                                | - Ritul: Aeee hossiyarr ron...  |
| 6  | 24/11/23, 11:55 am                                | - Suhani: Haa ylll dekh pre...  |
| 7  | 25/11/23, 1:01 pm                                 | - Suhani: Y         ...         |
| 8  | 25/11/23, 1:01 pm                                 | - Suhani: Ronak na to tu phn... |
| 9  | 25/11/23, 1:01 pm                                 | - Suhani: Na hee pics bhjril\n  |
| 10 | 25/11/23, 1:01 pm                                 | - Suhani: Dekh ylll kaise k...  |
| 11 | 25/11/23, 1:01 pm                                 | - Suhani: Ritul yo\n            |
| 12 | 25/11/23, 1:52 pm                                 | - Ritul: Oo Bhai bejde photo... |
| 13 | 25/11/23, 1:53 pm                                 | - Ritul: Muje bhiil\n           |
| 14 | 25/11/23, 1:53 pm                                 | - Suhani: Y         ...         |
| 15 | 25/11/23, 1:53 pm                                 | - Suhani: Or kuch nhl\n         |
| 16 | 27/11/23, 12:51 pm                                | - Suhani: Bhyiiii ronak tun...  |
| 17 | 27/11/23, 12:51 pm                                | - Suhani: Call bhi nhi utha...  |
| 18 | 27/11/23, 12:51 pm                                | - Suhani: Sach m\n              |
| 19 | 27/11/23, 12:52 pm                                | - Suhani: Rehne de ab mughe...  |
| 20 | 27/11/23, 12:52 pm                                | - Suhani: left\n                |
| 21 | 29/11/23, 6:25 pm                                 | - Ritul added Suhani\n          |
| 22 | 29/11/23, 6:45 pm                                 | - Suhani: Y         ...         |
| 23 | 29/11/23, 6:45 pm                                 | - Suhani: Tune mughe\n          |
| 24 | 29/11/23, 6:46 pm                                 | - Suhani: Mughe nahi rehna i... |
| 25 | 29/11/23, 6:46 pm                                 | - Suhani: Drame keri isme ro... |
| 26 | 29/11/23, 10:52 pm                                | - Moni Chaudhary: Suhani ko...  |
| 27 | 29/11/23, 10:53 pm                                | - Moni Chaudhary: Agr vo ni...  |
| 28 | 29/11/23, 11:15 pm                                | - Suhani: Are yll chod\n        |
| 29 | 08/01/24, 3:45 pm                                 | - Suhani: *The Applications ... |
| 30 |   | \n                              |
| 31 | This scheme is open to all students who for fi... |                                 |
| 32 |   | \n                              |
| 33 | *In 2024 Over 960,000 students will be given f... |                                 |
| 34 |   | \n                              |
| 35 | *Application has began and students that have ... |                                 |
| 36 |   | \n                              |
| 37 | Register and apply here\n                         |                                 |
| 38 | https://cuts.ke/Students-FREE-LAPTOPS\n           |                                 |
| 39 | 08/01/24, 3:54 pm - Ronak: Tu hi lele 😊 🙏\n       |                                 |
| 40 | 08/01/24, 3:54 pm - Ronak: Kese ho sab log 🥺\n    |                                 |
| 41 | 08/01/24, 3:55 pm - Ronak: Profile kaha gayii??\n |                                 |
| 42 | 08/01/24, 3:55 pm - Suhani: Okay\n                |                                 |
| 43 | 08/01/24, 3:55 pm - Suhani: Bdial\n               |                                 |
| 44 | 08/01/24, 3:55 pm - Suhani: Konsi ?\n             |                                 |

- Updated the Colab Marketplace VM image
- Python package upgrades:
  - autograd 1.6.1 -> 1.6.2
  - drivefs 76.0 -> 77.0
  - flax 0.6.11 -> 0.7.0
  - earthengine-api 0.1.357 -> 0.1.358
  - GDAL 3.3.2->3.4.3
  - google-cloud-bigquery-storage 2.20.0 -> 2.22.2
  - gspread-dataframe 3.0.8 -> 3.3.1
  - holidays 0.27.1 -> 0.29
  - jax 0.4.10 -> jax 0.4.13
  - jaxlib 0.4.10 -> jax 0.4.13
  - jupyterlab-widgets 3.0.7 -> 3.0.8
  - nbformat 5.9.0 -> 5.9.1
  - opencv-python-headless 4.7.0.72 -> 4.8.0.74
  - pygame 2.4.0 -> 2.5.0
  - spacy 3.5.3 -> 3.5.4
  - SQLAlchemy 2.0.16 -> 2.0.19
  - tabulate 0.8.10 -> 0.9.0
  - tensorflow-hub 0.13.0 -> 0.14.0

## 2023-06-23

- Launched AI coding features to subscribed users starting with Pro+ users in the US ([tweet](#) [post](#))
- Added the Kernel Selector in the Notebook Settings ([tweet](#))
- Fixed double space trimming issue in markdown ([#3766](#))
- Fixed run button indicator not always centered ([#3609](#))
- Fixed inconsistencies for automatic indentation on multi-line ([#3697](#))
- Upgraded Python from 3.10.11 to 3.10.12
- Python package updates:
  - duckdb 0.7.1 -> 0.8.1
  - earthengine-api 0.1.350 -> 0.1.357
  - flax 0.6.9 -> 0.6.11
  - google-cloud-bigquery 3.9.0 -> 3.10.0
  - google-cloud-bigquery-storage 2.19.1 -> 2.20.0
  - grpcio 1.54.0 -> 1.56.0
  - holidays 0.25 -> 0.27.1
  - nbformat 5.8.0 -> 5.9.0
  - prophet 1.1.3 -> 1.1.4
  - pydata-google-auth 1.7.0 -> 1.8.0
  - spacy 3.5.2 -> 3.5.3
  - tensorboard 2.12.2 -> 2.12.3
  - xgboost 1.7.5 -> 1.7.6
- Python package inclusions:
  - gcsfs 2023.6.0
  - geopandas 0.13.2
  - google-cloud-bigquery-connection 1.12.0
  - google-cloud-functions 1.13.0
  - grpc-google-iam-v1 0.12.6
  - multidict 6.0.4
  - tensorboard-data-server 0.7.1

## 2023-06-02

- Released the new site [colab.google](#)
- Published Colab's Docker runtime image to us-docker.pkg.dev/colab-images/public/runtime ([tweet](#) [instructions](#))
- Launched support for Google children accounts ([tweet](#))
- Launched DagsHub integration ([tweet](#) [post](#))
- Upgraded to Monaco Editor Version 0.37.1
- Fixed various Vim keybinding bugs
- Fixed issue where the N and P letters sometimes couldn't be typed ([#3664](#))
- Fixed rendering support for compositional inputs ([#3660](#), [#3679](#))
- Fixed lag in notebooks with lots of cells ([#3676](#))
- Improved support for R by adding a Runtime type notebook setting (Edit -> Notebook settings)
- Improved documentation for connecting to a local runtime (Connect -> Connect to a local runtime)
- Python package updates:
  - holidays 0.23 -> 0.25
  - jax 0.4.8 -> 0.4.10
  - jaxlib 0.4.8 -> 0.4.10
  - pip 23.0.1 -> 23.1.2
  - tensorflow-probability 0.19.0 -> 0.20.1
  - torch 2.0.0 -> 2.0.1
  - torchaudio 2.0.1 -> 2.0.2
  - torchdata 0.6.0 -> 0.6.1

## CHAT EMOJI ANALYSIS

```
def split_count(text):

    emoji_list = []
    data = regex.findall(r'\X', text)
    for word in data:
        if any(char in emoji.UNICODE_EMOJI for char in word):
            emoji_list.append(word)

    return emoji_list

data = pd.read_csv('/content/sathi (1).csv')

# Unicode ranges for emojis
emoji_ranges = [
    (0x1F300, 0x1F3F0), # Miscellaneous Symbols and Pictographs
    (0x1F400, 0x1F700), # Additional Symbols
]

# Generate a list of emojis
all_emojis = [chr(code) for start, end in emoji_ranges for code in range(start, end + 1)]

# Print the list of emojis
print(all_emojis)


import pandas as pd
import re

# Define a regex pattern for emojis
EMOJI_PATTERN = re.compile(
    "[\U0001F600-\U0001F64F]" # Emoticons
    "[\U0001F300-\U0001F5FF]" # Symbols & Pictographs
    "[\U0001F680-\U0001F6FF]" # Transport & Map Symbols
    "[\U0001F700-\U0001F77F]" # Alchemical Symbols
    "[\U0001F780-\U0001F7FF]" # Geometric Shapes Extended
    "[\U0001F800-\U0001F8FF]" # Supplemental Arrows-C
    "[\U0001F900-\U0001F9FF]" # Supplemental Symbols and Pictographs
    "[\U0001FA00-\U0001FA6F]" # Chess Symbols
    "[\U0001FA70-\U0001FAFF]" # Symbols and Pictographs Extended-A
    "[\U00002702-\U000027B0]" # Dingbats
    "[\U000024C2-\U0001F251]" # Enclosed Characters
)

# Load the CSV file
file_path = '/content/sathi (1).csv'
df = pd.read_csv(file_path)

# Function to extract emojis from a text
def extract_emojis(text):
    if isinstance(text, str):
        return EMOJI_PATTERN.findall(text)
    return []

# Apply the function to all cells in the DataFrame
all_emojis = df.applymap(extract_emojis)

# Combine all emojis found
emojis_list = []
for col in all_emojis.columns:
    emojis_list.extend(all_emojis[col].explode().dropna())

# Count total emojis and remove duplicates for unique ones
total_emojis = len(emojis_list)
unique_emojis = set(emojis_list)
```

- torchtext 0.15.1 -> 0.15.2
- torchvision 0.15.1 -> 0.15.2
- tornado 6.2 -> 6.3.1

### 2023-05-05

- Released GPU type selection for paid users, allowing them to choose a preferred NVidia GPU
- Upgraded R from 4.2.3 to 4.3.0
- Upgraded Python from 3.9.16 to 3.10.11
- Python package updates:
  - attrs 22.2.0 -> attrs 23.1.0
  - earthengine-api 0.1.349 -> earthengine-api 0.1.350
  - flax 0.6.8 -> 0.6.9
  - grpcio 1.53.0 -> 1.54.0
  - nbclient 0.7.3 -> 0.7.4
  - tensorflow-datasets 4.8.3 -> 4.9.2
  - termcolor 2.2.0 -> 2.3.0
  - zict 2.2.0 -> 3.0.0

### 2023-04-14

- Python package updates:
  - google-api-python-client 2.70.0 -> 2.84.0
  - google-auth-oauthlib 0.4.6 -> 1.0.0
  - google-cloud-bigquery 3.4.2 -> 3.9.0
  - google-cloud-datastore 2.11.1 -> 2.15.1
  - google-cloud-firebase 2.7.3 -> 2.11.0
  - google-cloud-language 2.6.1 -> 2.9.1
  - google-cloud-storage 2.7.0 -> 2.8.0
  - google-cloud-translate 3.8.4 -> 3.11.1
  - networkx 3.0 -> 3.1
  - notebook 6.3.0 -> 6.4.8
  - jax 0.4.7 -> 0.4.8
  - pandas 1.4.4 -> 1.5.3
  - spacy 3.5.1 -> 3.5.2
  - SQLAlchemy 1.4.47 -> 2.0.9
  - xgboost 1.7.4 -> 1.7.5

### 2023-03-31

- Improve bash ! syntax highlighting ([GitHub issue](#))
- Fix bug where VIM keybindings weren't working in the file editor
- Upgraded R from 4.2.2 to 4.2.3
- Python package updates:
  - arviz 0.12.1 -> 0.15.1
  - astropy 4.3.1 -> 5.2.2
  - dopamine-rl 1.0.5 -> 4.0.6
  - gensim 3.6.0 -> 4.3.1
  - ipykernel 5.3.4 -> 5.5.6
  - ipython 7.9.0 -> 7.34.0
  - jax 0.4.4 -> 0.4.7
  - jaxlib 0.4.4 -> 0.4.7
  - jupyter\_core 5.2.0 -> 5.3.0
  - keras 2.11.0 -> 2.12.0
  - lightgbm 2.2.3 -> 3.3.5
  - matplotlib 3.5.3 -> 3.7.1
  - nltk 3.7 -> 3.8.1
  - opencv-python 4.6.0.66 -> 4.7.0.72
  - plotly 5.5.0 -> 5.13.1
  - pymc 4.1.4 -> 5.1.2
  - seaborn 0.11.2 -> 0.12.2
  - spacy 3.4.4 -> 3.5.1
  - sympy 1.7.1 -> 1.11.1
  - tensorboard 2.11.2 -> 2.12.0
  - tensorflow 2.11.0 -> 2.12.0
  - tensorflow-estimator 2.11.0 -> 2.12.0
  - tensorflow-hub 0.12.0 -> 0.13.0
  - torch 1.13.1 -> 2.0.0
  - torchaudio 0.13.1 -> 2.0.1
  - torchtext 0.14.1 -> 0.15.1
  - torchvision 0.14.1 -> 0.15.1

### 2023-03-10

- Added the [Colab editor shortcuts](#) example notebook
- Fixed triggering of @-mention and email autocomplete for large comments ([GitHub issue](#))
- Added View Resources to the Runtime menu
- Made file viewer images fit the view by default, resizing to original size on click

```
# Print results
print(f"Total emojis used in the file: {total_emojis}")
print(f"Unique emojis used: {len(unique_emojis)}")
print("Unique emojis:", ".join(unique_emojis))

→ Total emojis used in the file: 6
Unique emojis used: 5
Unique emojis: 🍦 🎉 😊 🎉 🍦

import pandas as pd
import re

# Define a regex pattern for emojis
EMOJI_PATTERN = re.compile(
    "[\U0001F600-\U0001F64F]" # Emoticons
    "[\U0001F300-\U0001F5FF]" # Symbols & Pictographs
    "[\U0001F680-\U0001F6FF]" # Transport & Map Symbols
    "[\U0001F700-\U0001F77F]" # Alchemical Symbols
    "[\U0001F780-\U0001F7FF]" # Geometric Shapes Extended
    "[\U0001F800-\U0001F8FF]" # Supplemental Arrows-C
    "[\U0001F900-\U0001F9FF]" # Supplemental Symbols and Pictographs
    "[\U0001FA00-\U0001FA6F]" # Chess Symbols
    "[\U0001FA70-\U0001FAFF]" # Symbols and Pictographs Extended-A
    "[\U00002702-\U000027B0]" # Dingbats
    "[\U000024C2-\U0001F251]" # Enclosed Characters
)

# Load the CSV file
file_path = '/content/sathi (1).csv'
df = pd.read_csv(file_path)

# Check all cells for messages containing emojis
def contains_emoji(text):
    if isinstance(text, str):
        return bool(EMOJI_PATTERN.search(text))
    return False

# Apply the function to each cell in the DataFrame
messages_with_emojis = df[df.applymap(contains_emoji).any(axis=1)]

# Display messages with emojis
print("Messages containing emojis:")
print(messages_with_emojis)

→ Messages containing emojis:
      Date      Time      Contacts      Messages
38 08/01/24, 3:54 pm - Ronak: Tu hi lele😊❤️
39 08/01/24, 3:54 pm - Ronak: Kese ho sab log👉

import pandas as pd
import re
import matplotlib.pyplot as plt
from collections import Counter
import emoji

# Define a regex pattern for emojis
EMOJI_PATTERN = re.compile(
    "[\U0001F600-\U0001F64F]" # Emoticons
    "[\U0001F300-\U0001F5FF]" # Symbols & Pictographs
    "[\U0001F680-\U0001F6FF]" # Transport & Map Symbols
    "[\U0001F700-\U0001F77F]" # Alchemical Symbols
    "[\U0001F780-\U0001F7FF]" # Geometric Shapes Extended
    "[\U0001F800-\U0001F8FF]" # Supplemental Arrows-C
    "[\U0001F900-\U0001F9FF]" # Supplemental Symbols and Pictographs
    "[\U0001FA00-\U0001FA6F]" # Chess Symbols
    "[\U0001FA70-\U0001FAFF]" # Symbols and Pictographs Extended-A
    "[\U00002702-\U000027B0]" # Dingbats
    "[\U000024C2-\U0001F251]" # Enclosed Characters
)

# Load the CSV file
```

- When in VIM mode, enable copy as well as allowing propagation to monaco-vim to escape visual mode ([GitHub issue](#))
- Upgraded CUDA 11.6.2 -> 11.8.0 and cuDNN 8.4.0.27 -> 8.7.0.84
- Upgraded Nvidia drivers 525.78.01 -> 530.30.02
- Upgraded Python 3.8.10 -> 3.9.16
- Python package updates:
  - beautifulsoup4 4.6.3 -> 4.9.3
  - bokeh 2.3.3 -> 2.4.3
  - debugpy 1.0.0 -> 1.6.6
  - Flask 1.1.4 -> 2.2.3
  - jax 0.3.25 -> 0.4.4
  - jaxlib 0.3.25 -> 0.4.4
  - Jinja2 2.11.3 -> 3.1.2
  - matplotlib 3.2.2 -> 3.5.3
  - nbconvert 5.6.1 -> 6.5.4
  - pandas 1.3.5 -> 1.4.4
  - pandas-datareader 0.9.0 -> 0.10.0
  - pandas-profiling 1.4.1 -> 3.2.0
  - Pillow 7.1.2 -> 8.4.0
  - plotnine 0.8.0 -> 0.10.1
  - scikit-image 0.18.3 -> 0.19.3
  - scikit-learn 1.0.2 -> 1.2.2
  - scipy 1.7.3 -> 1.10.1
  - setuptools 57.4.0 -> 63.4.3
  - sklearn-pandas 1.8.0 -> 2.2.0
  - statsmodels 0.12.2 -> 0.13.5
  - urllib3 1.24.3 -> 1.26.14
  - Werkzeug 1.0.1 -> 2.2.3
  - wrapt 1.14.1 -> 1.15.0
  - xgboost 0.90 -> 1.7.4
  - xlrd 1.2.0 -> 2.0.1

## 2023-02-17

- Show graphs of RAM and disk usage in notebook toolbar
- Copy cell links directly to the clipboard instead of showing a dialog when clicking on the link icon in the cell toolbar
- Updated the [Colab Marketplace VM image](#)
- Upgraded CUDA to 11.6.2 and cuDNN to 8.4.0.27
- Python package updates:
  - tensorflow 2.9.2 -> 2.11.0
  - tensorboard 2.9.1 -> 2.11.2
  - keras 2.9.0 -> 2.11.0
  - tensorflow-estimator 2.9.0 -> 2.11.0
  - tensorflow-probability 0.17.0 -> 0.19.0
  - tensorflow-gcs-config 2.9.0 -> 2.11.0
  - earthengine-api 0.1.339 -> 0.1.341
  - flatbuffers 1.12 -> 23.1.21
  - platformdirs 2.6.2 -> 3.0.0
  - pydata-google-auth 1.6.0 -> 1.7.0
  - python-utils 3.4.5 -> 3.5.2
  - tenacity 8.1.0 -> 8.2.1
  - tifffile 2023.1.23.1 -> 2023.2.3
  - notebook 5.7.16 -> 6.3.0
  - tornado 6.0.4 -> 6.2
  - aiohttp 3.8.3 -> 3.8.4
  - charset-normalizer 2.1.1 -> 3.0.1
  - fastai 2.7.0 -> 2.7.1
  - soundfile 0.11.0 -> 0.12.1
  - typing-extensions 4.4.0 -> 4.5.0
  - widgetsnbextension 3.6.1 -> 3.6.2
  - pydantic 1.10.4 -> 1.10.5
  - zipp 3.12.0 -> 3.13.0
  - numpy 1.21.6 -> 1.22.4
  - drivefs 66.0 -> 69.0
  - gdal 3.0.4 -> 3.3.2 [GitHub issue](#)
- Added libudunits2-dev for smoother R package installs [GitHub issue](#)

## 2023-02-03

- Improved tooltips for pandas series to show common statistics about the series object
- Made the forms dropdown behave like an autocomplete box when it allows input
- Updated the nvidia driver from 460.32.03 to 510.47.03
- Python package updates:
  - absl-py 1.3.0 -> 1.4.0
  - bleach 5.0.1 -> 6.0.0

```

file_path = '/content/sathi (1).csv'
df = pd.read_csv(file_path)

# Function to extract emojis from a text
def extract_emojis(text):
    if isinstance(text, str):
        return EMOJI_PATTERN.findall(text)
    return []

# Apply the function to all cells in the DataFrame
all_emojis = df.applymap(extract_emojis)

# Combine all emojis found into a single list
emojis_list = []
for col in all_emojis.columns:
    emojis_list.extend(all_emojis[col].explode().dropna())

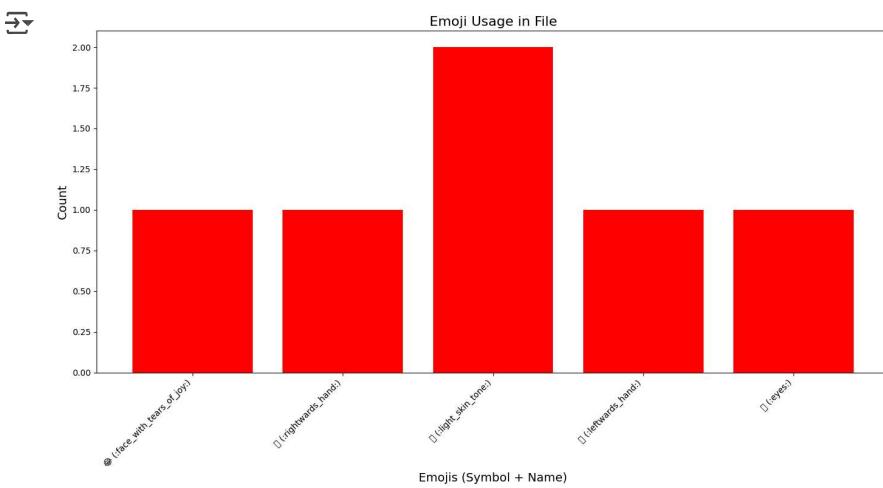
# Count occurrences of each emoji
emoji_counts = Counter(emojis_list)

# Generate labels for x-axis (emoji + name)
emojis = list(emoji_counts.keys())
counts = list(emoji_counts.values())
emoji_labels = [f"{em} ({emoji.demojize(em)})" for em in emojis]

# Plot the bar chart
plt.figure(figsize=(14, 8))
plt.bar(emojis, counts, color='red')
plt.xlabel('Emojis (Symbol + Name)', fontsize=14)
plt.ylabel('Count', fontsize=14)
plt.title('Emoji Usage in File', fontsize=16)
plt.xticks(ticks=range(len(emojis)), labels=emoji_labels, fontsize=10, rotation=45, ha='center')
plt.tight_layout()

# Display the plot
plt.show()

```



```

import pandas as pd

# Load the CSV file

```

- cachetools 5.2.1 -> 5.3.0
- cmdstanpy 1.0.8 -> 1.1.0
- dnspython 2.2.1 -> 2.3.0
- fsspec 2022.11.0 -> 2023.1.0
- google-cloud-bigquery-storage 2.17.0 -> 2.18.1
- holidays 0.18 -> 0.19
- jupyter-core 5.1.3 -> 5.2.0
- packaging 21.3 -> 23.0
- prometheus-client 0.15.0 -> 0.16.0
- pyct 0.4.8 -> 0.5.0
- pydata-google-auth 1.5.0 -> 1.6.0
- python-slugify 7.0.0 -> 8.0.0
- sqlalchemy 1.4.46 -> 2.0.0
- tensorflow-io-gcs-filesystem 0.29.0 -> 0.30.0
- tifffile 2022.10.10 -> 2023.1.23.1
- zipp 3.11.0 -> 3.12.0
- Pinned sqlalchemy to version 1.4.46

## 2023-01-12

- Added support for @-mention and email autocomplete in comments
- Improved errors when GitHub notebooks can't be loaded
- Increased color contrast for colors used for syntax highlighting in the code editor
- Added terminal access for custom GCE VM runtimes
- Upgraded Ubuntu from 18.04 LTS to 20.04 LTS ([GitHub issue](#))
- Python package updates:
  - GDAL 2.2.2 -> 2.2.3.
  - NumPy from 1.21.5 to 1.21.6.
  - attrs 22.1.0 -> 22.2.0
  - chardet 3.0.4 -> 4.0.0
  - cloudpickle 1.6.0 -> 2.2.0
  - filelock 3.8.2 -> 3.9.0
  - google-api-core 2.8.2 -> 2.11.0
  - google-api-python-client 1.12.11 -> 2.70.0
  - google-auth-httplib2 0.0.3 -> 0.1.0
  - google-cloud-bigquery 3.3.5 -> 3.4.1
  - google-cloud-datastore 2.9.0 -> 2.11.0
  - google-cloud-firebase 2.7.2 -> 2.7.3
  - google-cloud-storage 2.5.0 -> 2.7.0
  - holidays 0.17.2 -> holidays 0.18
  - importlib-metadata 5.2.0 -> 6.0.0
  - networkx 2.8.8 -> 3.0
  - opencv-python-headless 4.6.0.66 -> 4.7.0.68
  - pip 21.1.3 -> 22.0.4
  - pip-tools 6.2.0 -> 6.6.2
  - prettytable 3.5.0 -> 3.6.0
  - requests 2.23.0 -> 2.25.1
  - termcolor 2.1.1 -> 2.2.0
  - torch 1.13.0 -> 1.13.1
  - torchaudio 0.13.0 -> 0.13.1
  - torchtext 0.14.0 -> 0.14.1
  - torchvision 0.14.0 -> 0.14.1

## 2022-12-06

- Made fallback runtime version available until mid-December ([GitHub issue](#))
- Upgraded to Python 3.8 ([GitHub issue](#))
- Python package updates:
  - jax from 0.3.23 to 0.3.25, jaxlib from 0.3.22 to 0.3.25
  - pyarrow from 6.0.1 to 9.0.0
  - torch from 1.12.1 to 1.13.0
  - torchaudio from 0.12.1 to 0.13.0
  - torchvision from 0.13.1 to 0.14.0
  - torchtext from 0.13.1 to 0.14.0
  - xlr from 1.1.0 to 1.2.0
  - DriveFS from 62.0.1 to 66.0.3
- Made styling of markdown tables in outputs match markdown tables in text cells
- Improved formatting for empty interactive table rows
- Fixed syntax highlighting for variables with names that contain Python keywords ([GitHub issue](#))

## 2022-11-11

- Added more dark editor themes for Monaco (when in dark mode, "Editor colorization" appears as an option in the Editor tab of the Tools → Settings dialog)

```

file_path = '/content/sathi (1).csv'
df = pd.read_csv(file_path)

# Display the column names
print("Columns in the file:")
print(df.columns.tolist())

→ Columns in the file:
['Date'      'Time'      'Contacts'  'Messages']

import pandas as pd

# Load the CSV file
file_path = '/content/sathi (1).csv'
df = pd.read_csv(file_path)

# Display column names to check available columns
print("Columns in the file:", df.columns.tolist())

# Display the first few rows of the dataset to inspect the content
print("\nFirst few rows of the dataset:")
print(df.head())

→ Columns in the file: ['Date'      'Time'      'Contacts'  'Messages']

First few rows of the dataset:
      Date        Time    Contacts  Messages
0  24/11/23, 11:53 am - Suhani: Ayee ronak hum te...
1  24/11/23, 11:53 am - Suhani: Photos bhej de
2  24/11/23, 11:53 am - Suhani: Sari
3  24/11/23, 11:53 am - Suhani: Yllllllllllllllll...
4  24/11/23, 11:54 am - Ritul: Aeee hossiyarr ron...

import pandas as pd
from wordcloud import WordCloud
import matplotlib.pyplot as plt

# Load the CSV file
file_path = '/content/sathi (1).csv'
df = pd.read_csv(file_path)

# Display column names to identify the correct one
print("Columns in the file:", df.columns.tolist())

# Replace 'Contacts' with the correct column name
text_column = 'Date'      'Time'      'Contacts'  'Messages' # Replace with the correct column name
if text_column in df.columns:
    all_text = " ".join(df[text_column].dropna().astype(str))
else:
    raise ValueError(f"Column '{text_column}' not found in the file.")

# Generate the word cloud
wordcloud = WordCloud(
    width=800,
    height=400,
    background_color='white',
    colormap='viridis',
    max_words=200
).generate(all_text)

# Plot the word cloud
plt.figure(figsize=(12, 6))
plt.imshow(wordcloud, interpolation='bilinear')
plt.axis('off') # Remove axes
plt.title('Word Cloud of Messages', fontsize=16)
plt.show()

```

- Fixed bug where collapsed forms were deleted on mobile ([GitHub issue](#))
- Python package updates:
  - rpy2 from 3.4.0 to 3.5.5 ([GitHub issue](#))
  - notebook from 5.5.0 to 5.7.16
  - tornado from 5.1.1 to 6.0.4
  - tensorflow\_probability from 0.16.0 to 0.17.0
  - pandas-gbq from 0.13.3 to 0.17.9
  - protobuf from 3.17.3 to 3.19.6
  - google-api-core[grpc] from 1.31.5 to 2.8.2
  - google-cloud-bigquery from 1.21.0 to 3.3.5
  - google-cloud-core from 1.0.1 to 2.3.2
  - google-cloud-datastore from 1.8.0 to 2.9.0
  - google-cloud-firebase from 1.7.0 to 2.7.2
  - google-cloud-language from 1.2.0 to 2.6.1
  - google-cloud-storage from 1.18.0 to 2.5.0
  - google-cloud-translate from 1.5.0 to 3.8.4

## 2022-10-21

- Launched a single-click way to get from BigQuery to Colab to further explore query results ([announcement](#))
- Launched [Pro, Pro+, and Pay As You Go](#) to 19 additional countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, Greece, Hungary, Latvia, Lithuania, Norway, Portugal, Romania, Slovakia, Slovenia, and Sweden ([tweet](#))
- Updated jax from 0.3.17 to 0.3.23, jaxlib from 0.3.15 to 0.3.22, TensorFlow from 2.8.2 to 2.9.2, CUDA from 11.1 to 11.2, and cuDNN from 8.0 to 8.1 ([backend-info](#))
- Added a readonly option to [drive.mount](#)
- Fixed bug where Xarray was not working ([GitHub issue](#))
- Modified Markdown parsing to ignore block quote symbol within MathJax ([GitHub issue](#))

## 2022-09-30

- Launched [Pay As You Go](#), allowing premium GPU access without requiring a subscription
- Added vim and tcllib to our runtime image
- Fixed bug where open files were closed on kernel disconnect ([GitHub issue](#))
- Fixed bug where the play button/execution indicator was not clickable when scrolled into the cell output ([GitHub issue](#))
- Updated the styling for form titles so that they avoid obscuring the code editor
- Created a GitHub repo, [backend-info](#), with the latest apt-list.txt and pip-freeze.txt files for the Colab runtime ([GitHub issue](#))
- Added [files.upload\\_file\(filename\)](#) to upload a file from the browser to the runtime with a specified filename

## 2022-09-16

- Upgraded pymc from 3.11.0 to 4.1.4, jax from 0.3.14 to 0.3.17, jaxlib from 0.3.14 to 0.3.15, fsspec from 2022.8.1 to 2022.8.2
- Modified our save flow to avoid persisting Drive filenames as titles in notebook JSON
- Updated our [Terms of Service](#)
- Modified the Jump to Cell command to locate the cursor at the end of the command palette input (Jump to cell in Tools → Command palette in a notebook with section headings)
- Updated the styling of the Drive notebook comment UI
- Added support for terminating your runtime from code: python from google.colab import runtime runtime.unassign()
- Added regex filter support to the Recent notebooks dialog
- Inline google.colab.files.upload JS to fix files.upload() not working ([GitHub issue](#))

## 2022-08-26

- Upgraded PyYAML from 3.13 to 6.0 ([GitHub issue](#)), drives from 61.0.3 to 62.0.1
- Upgraded TensorFlow from 2.8.2 to 2.9.1 and ipywidgets from 7.7.1 to 8.0.1 but rolled both back due to a number of user reports ([GitHub issue](#), [GitHub issue](#))
- Stop persisting inferred titles in notebook JSON ([GitHub issue](#))

## ▼ WEEKLY MESSAGES ANALYSIS

```
nltk.download('stopwords')
from nltk.tokenize import word_tokenize
from nltk.probability import FreqDist
from nltk.corpus import stopwords
import datetime
import matplotlib.pyplot as plt
import seaborn as sns
from os import path
from PIL import Image
from wordcloud import WordCloud, STOPWORDS, ImageColorGenerator
%matplotlib inline
```

```
[nltk_data]  Downloading package stopwords to /root/nltk_data...
[nltk_data]  Unzipping corpora/stopwords.zip.
```

data .info

```
→ pandas.core.frame.DataFrame.info
def info(verbose: bool | None=None, buf: WriteBuffer[str] | None=None,
        max_cols: int | None=None, memory_usage: bool | str | None=None, show_counts:
        bool | None=None) -> None
```

Print a concise summary of a DataFrame.

This method prints information about a DataFrame including the index dtype and columns, non-null values and memory usage

## Parameters

```
import matplotlib.pyplot as plt
```

```
# Your chat dictionary. Replace 'chat_partner_1' etc. with the actual names of your chat partners
```

```
chat_dict = {  
    'Suhani': 3,  
    'Moni Chaudhary':2,  
    'Ritul':5,  
    'Ronak':7  
}
```

```
# Create a list of chat partners and a list of daily chat counts
chat_partners = list(chat_dict.keys())
daily_chat_counts = list(chat_dict.values())
```

- Fix bug in background execution which affected some Pro+ users ([GitHub issue](#))
  - Fix bug where Download as .py incorrectly handled text cells ending in a double quote
  - Fix bug for Pro and Pro+ users where we weren't honoring the preference (Tools → Settings) to use a temporary scratch notebook as the default landing page
  - Provide undo/redo for scratch cells
  - When writing ipynb files, serialize empty multiline strings as [] for better consistency with JupyterLab

2022-08-11

- Upgraded ipython from 5.5.0 to 7.9.0, fbprophet 0.7 to prophet 1.1, tensorflow-datasets from 4.0.1 to 4.6.0, drivefs from 60.0.2 to 61.0.3, pytorch from 1.12.0 to 1.12.1, numba from 0.51 to 0.56, and lxml from 4.2.0 to 4.9.1
  - Loosened our requests version requirement ([GitHub issue](#))
  - Removed support for TensorFlow 1
  - Added Help → Report Drive abuse for Drive notebooks
  - Fixed indentation for Python lines ending in [
  - Modified styling of tables in Markdown to left-align them rather than centering them
  - Fixed special character replacement when copying interactive tables as Markdown
  - Fixed ansi 8-bit color parsing ([GitHub issue](#))
  - Configured logging to preempt transitive imports and other loading from implicitly configuring the root logger
  - Modified forms to use a value of None instead of causing a parse error when clearing raw and numeric-typed form fields

2022-07-22

- Update scipy from 1.4.1 to 1.7.3, drivefs from 59.0.3 to 60.0.2, pytorch from 1.11 to 1.12, jax & jaxlib from 0.3.8 to 0.3.14, opencv-python from 4.1.2.30 to 4.6.0.66, spaCy from 3.3.1 to 3.4.0, and dlib from 19.18.0 to 19.24.0
  - Fix Open in tab doc link which was rendering incorrectly ([GitHub issue](#))
  - Add a preference for the default tab orientation to the Site section of the settings menu under Tools → Settings
  - Show a warning for USE\_AUTH\_EPHEM usage when running authenticate\_user on a TPU runtime ([code](#))

2022-07-01

- Add a preference for code font to the settings menu under Tools → Settings
  - Update drives from 58.0.3 to 59.0.3 and spacy from 2.2.4 to 3.3.1
  - Allow [display\\_data](#) and [execute\\_result](#) text outputs to wrap, matching behavior of JupyterLab (does not affect stream outputs/print statements).
  - Improve LSP handling of some magics, esp. %writefile ([GitHub issue](#)).
  - Add a [FAQ entry](#) about the mount Drive button behavior and include link buttons for each FAQ entry.
  - Fix bug where the notebook was sometimes hidden behind other tabs on load when in single pane view.
  - Fix issue with inconsistent scrolling when an editor is in multi-select mode.
  - Fix bug where clicking on a link in a form would navigate away from the notebook
  - Show a confirmation dialog before performing Replace all from the Find and replace pane.

2022-06-10

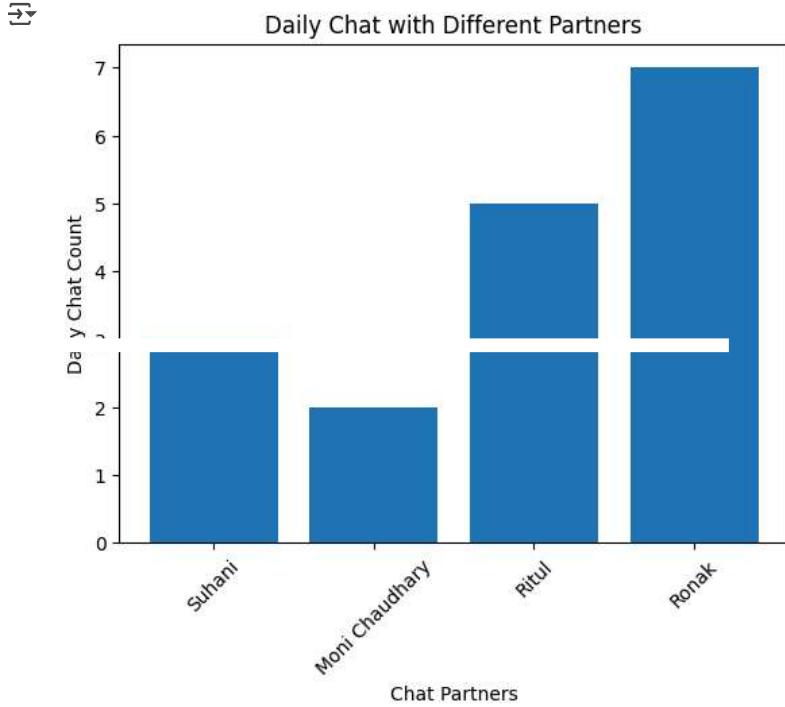
- Update drivefs from 57.0.5 to 58.0.3 and tensorflow from 2.8.0 to 2.8.2
  - Support more than 100 repos in the GitHub repo selector shown in the open dialog and the clone to GitHub dialog
  - Show full notebook names on hover in the open dialog
  - Improve the color contrast for links, buttons, and the ipywidgets.Accordion widget in dark mode

2022-05-20

```
# Create a bar plot
plt.bar(chat_partners, daily_chat_counts)

# Customize the appearance of the plot
plt.title('Daily Chat with Different Partners')
plt.xlabel('Chat Partners')
plt.ylabel('Daily Chat Count')
plt.xticks(rotation=45) # Rotate the chat partner names by 45 degrees to fit them properly

# Show the plot
plt.show()
```



```
import matplotlib.pyplot as plt

# Your chat data. Replace '2022-03-01', '2022-03-02', etc. with the actual dates of your data
daily_chat_dates = ['2023-11-01', '2023-01-02', '2023-11-25', '2023-11-04', '2024-01-01']
daily_chat_counts = [10, 8, 5, 7, 2]

# Create a line plot
plt.plot(daily_chat_dates, daily_chat_counts)

# Customize the appearance of the plot
plt.title('Daily Chat Count Over Time')
plt.xlabel('Date')
plt.ylabel('Daily Chat Count')
plt.xticks(rotation=45) # Rotate the chat partner names by 45 degrees to fit them properly

# Show the plot
plt.show()
```

- Support URL params for linking to some common pref settings: [force\\_theme=dark](#), [force\\_corgi\\_mode=1](#), [force\\_font\\_size=14](#). Params forced by URL are not persisted unless saved using Tools → Settings.
- Add a class `markdown-google-sans` to allow Markdown to render in Google Sans
- Update monaco-vim from 0.1.19 to 0.3.4
- Update drives from 55.0.3 to 57.0.5, jax from 0.3.4 to 0.3.8, and jaxlib from 0.3.2 to 0.3.7

## 2022-04-29

- Added 🌈 mode (under Miscellaneous in Tools → Settings)
- Added "Disconnect and delete runtime" option to the menu next to the Connect button
- Improved rendering of filter options in an interactive table
- Added git-lfs to the base image
- Updated torch from 1.10.0 to 1.11.0, jupyter-core from 4.9.2 to 4.10.0, and cmake from 3.12.0 to 3.22.3
- Added more details to our [FAQ](#) about unsupported uses (using proxies, downloading torrents, etc.)
- Fixed [issue](#) with apt-get dependencies

## 2022-04-15

- Add an option in the file browser to show hidden files.
- Upgrade gdown from 4.2.0 to 4.4.0, google-api-core/grpc from 1.26.0 to 1.31.5, and pytz from 2018.4 to 2022.1

## 2022-03-25

- Launched [Pro/Pro+](#) to 12 additional countries: Australia, Bangladesh, Colombia, Hong Kong, Indonesia, Mexico, New Zealand, Pakistan, Philippines, Singapore, Taiwan, and Vietnam
- Added [google.colab.auth.authenticate\\_service\\_account](#) to support using [Service Account keys](#)
- Update jax from 0.3.1 to 0.3.4 & jaxlib from 0.3.0 to 0.3.2
- Fixed an issue with Twitter previews of notebooks shared as GitHub Gists

## 2022-03-10

- Launched [Pro/Pro+](#) to 10 new countries: Ireland, Israel, Italy, Morocco, the Netherlands, Poland, Spain, Switzerland, Turkey, and the United Arab Emirates
- Launched support for [scheduling notebooks for Pro+ users](#)
- Fixed bug in interactive datatables where filtering by number did not work
- Finished removing the python2 kernelspec

## 2022-02-25

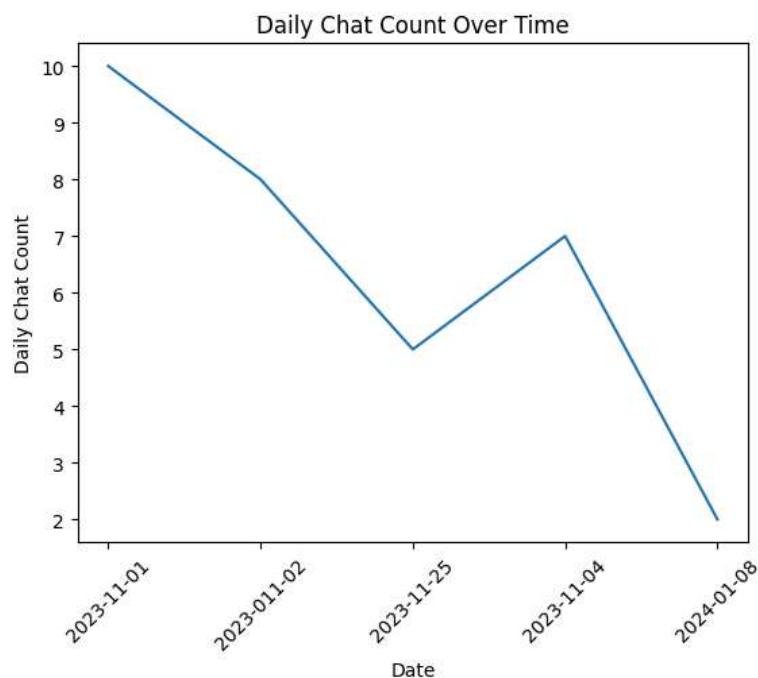
- Made various accessibility improvements to the header
- Fix bug with [forms run:auto](#) where a form field change would trigger multiple runs
- Minor updates to the [bigquery example notebook](#) and snippet
- Include background execution setting in the sessions dialog for Pro+ users
- Update tensorflow-probability from 0.15 to 0.16
- Update jax from 0.2.25 to 0.3.1 & jaxlib from 0.1.71 to 0.3.0

## 2022-02-11

- Improve keyboard navigation for the open dialog
- Fix issue where nvidia-smi stopped reporting resource utilization for some users who were modifying the version of nvidia used
- Update tensorflow from 2.7 to 2.8, keras from 2.7 to 2.8, numpy from 1.19.5 to 1.21.5, tables from 3.4.4 to 3.7.0

## 2022-02-04

- Improve UX for opening content alongside your notebook, such as files opened from the file browser. This includes a multi-pane view and drag-drop support
- Better Twitter previews when sharing example Colab notebooks and notebooks opened from GitHub Gists
- Update pandas from 1.1.5 to 1.3.5



```
import matplotlib.pyplot as plt
from datetime import datetime, timedelta

# Dummy data
daily_chat_dates = [datetime(2021, 1, i) for i in range(1, 32)]
daily_chat_counts = [i%20 for i in range(1, 32)]

# Prepare weekly data
week_labels = []
week_counts = []

for date in daily_chat_dates:
    week_no = date.isocalendar()[1]
    year = date.year
    week_label = f"Week {week_no} - {year}"

    if week_label not in week_labels:
        week_labels.append(week_label)
        week_counts.append(0)

    week_index = week_labels.index(week_label)
    week_counts[week_index] += daily_chat_counts[daily_chat_dates.index(date)]

# Create line plot
plt.figure(figsize=(10, 6))
plt.plot(week_labels, week_counts, marker='o', linestyle='--')

# Customize plot appearance
plt.title('Weekly Message Count')
plt.xlabel('Week')
plt.ylabel('Message Count')
plt.grid(True)

# Show plot
plt.show()
```

- Update openpyxl from 2.5.9 to 3.0.0 and pyarrow from 3.0.0 to 6.0.0
- Link to the release notes from the Help menu

#### 2022-01-28

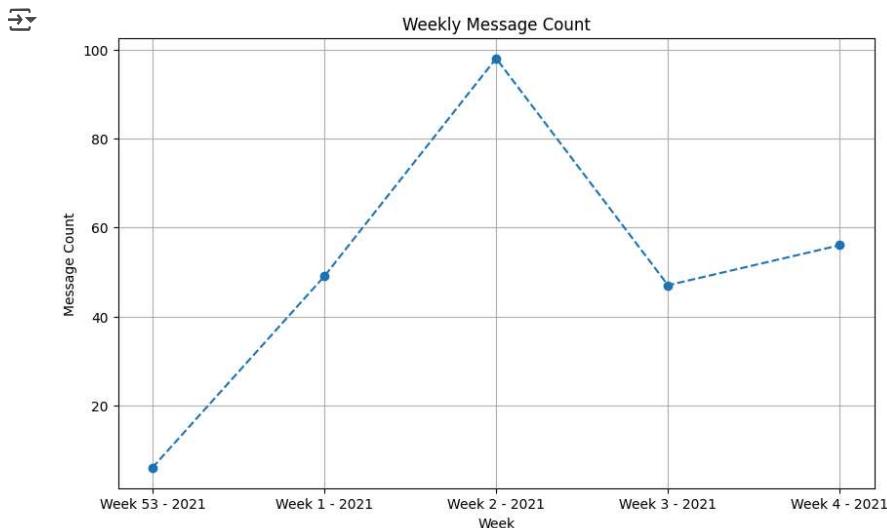
- Add a copy button to [data tables](#)
- Python LSP support for better completions and code diagnostics. This can be configured in the Editor Settings (Tools → Settings)
- Update [gspread examples](#) in our documentation
- Update gdown from 3.6 to 4.2

#### 2022-01-21

- New documentation for the [google.colab package](#)
- Show GPU RAM in the resource usage tab
- Improved security for mounting Google Drive which disallows mounting Drive from accounts other than the one currently executing the notebook

#### 2022-01-14

- Add a preference (Tools → Settings) to use a temporary scratch notebook as the default landing page
- Fix bug where / and : weren't working in VIM mode
- Update gspread from 3.0 to 3.4
- Update the [Colab Marketplace VM image](#)



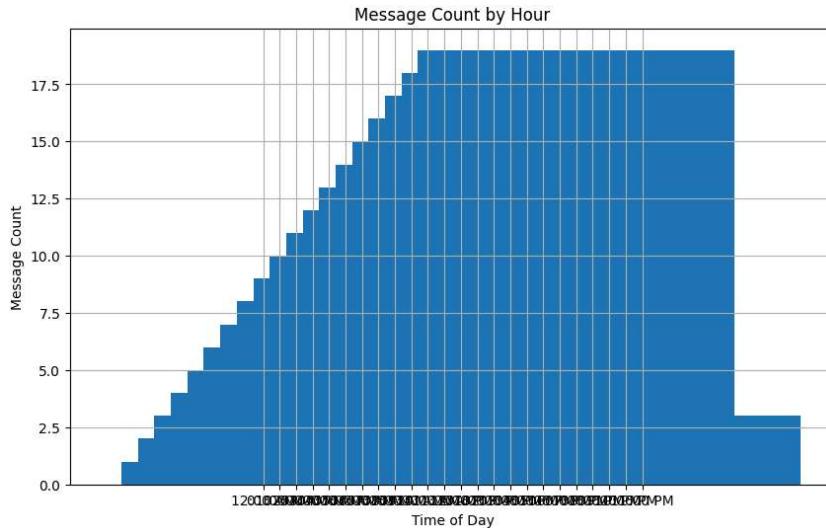
```
import matplotlib.pyplot as plt
from datetime import datetime, timedelta

# Dummy data
hourly_chat_dates = [datetime(2023, 1, 1, i) for i in range(0, 24)]
hourly_chat_counts = [i%20 for i in range(0, 24)]

# Create bar plot
plt.figure(figsize=(10, 6))
plt.bar(hourly_chat_dates, hourly_chat_counts)

# Customize plot appearance
plt.title('Message Count by Hour')
plt.xlabel('Time of Day')
plt.ylabel('Message Count')
plt.xticks(hourly_chat_dates, [date.strftime("%I:%M %p") for date in hourly_chat_dates])
plt.grid(True)

# Show plot
plt.show()
```



```

import matplotlib.pyplot as plt
from collections import Counter
import re

# Function to read the file and count the words
def count_words_in_file(file_path):
    with open(file_path, 'r', encoding='utf-8') as file:
        text = file.read().lower() # Read the file content and convert to lowercase
        words = re.findall(r'\b\w+\b', text) # Find all words using regular expression
    return Counter(words) # Count the frequency of each word

# Function to plot the most common words
def plot_most_common_words(file_path, top_n=10):
    word_counts = count_words_in_file(file_path)
    common_words = word_counts.most_common(top_n) # Get the top 'n' most common words

    # Prepare data for plotting
    words, counts = zip(*common_words)

    # Plotting the graph
    plt.figure(figsize=(10, 6))
    plt.bar(words, counts)
    plt.xlabel('Words')
    plt.ylabel('Frequency')
    plt.title(f'Top {top_n} Most Common Words')
    plt.xticks(rotation=45)
    plt.show()

# Usage example
file_path = '/content/sathi.txt' # Replace with your file path
plot_most_common_words(file_path, top_n=10) # Adjust top_n to display more/less words

```