

Running a DeepWonder notebook

# Save a copy of the Colab notebook into your Google drive.



The screenshot shows the Google Colab interface for a notebook titled "Deepwonder\_deep\_widefield\_neuron\_finder.ipynb". The "File" menu is open, and the option "Save a copy in Drive" is highlighted. A red arrow labeled "1" points to the "File" menu, and another red arrow labeled "2" points to the "Save a copy in Drive" option. The notebook content displays a complex network graph with blue and orange nodes and edges. The interface includes a top bar with "Comment", "Share", and "Settings" icons, and a right sidebar with "RAM", "Disk", and "Editing" status indicators.

Deepwonder\_deep\_widefield\_neuron\_finder.ipynb ☆

File Edit View Insert Runtime Tools Help Last saved at 4:33 PM

Comment Share Settings Z

RAM Disk Editing

Save a copy in Drive

Save a copy as a GitHub Gist

Save a copy in GitHub

Save Ctrl+S

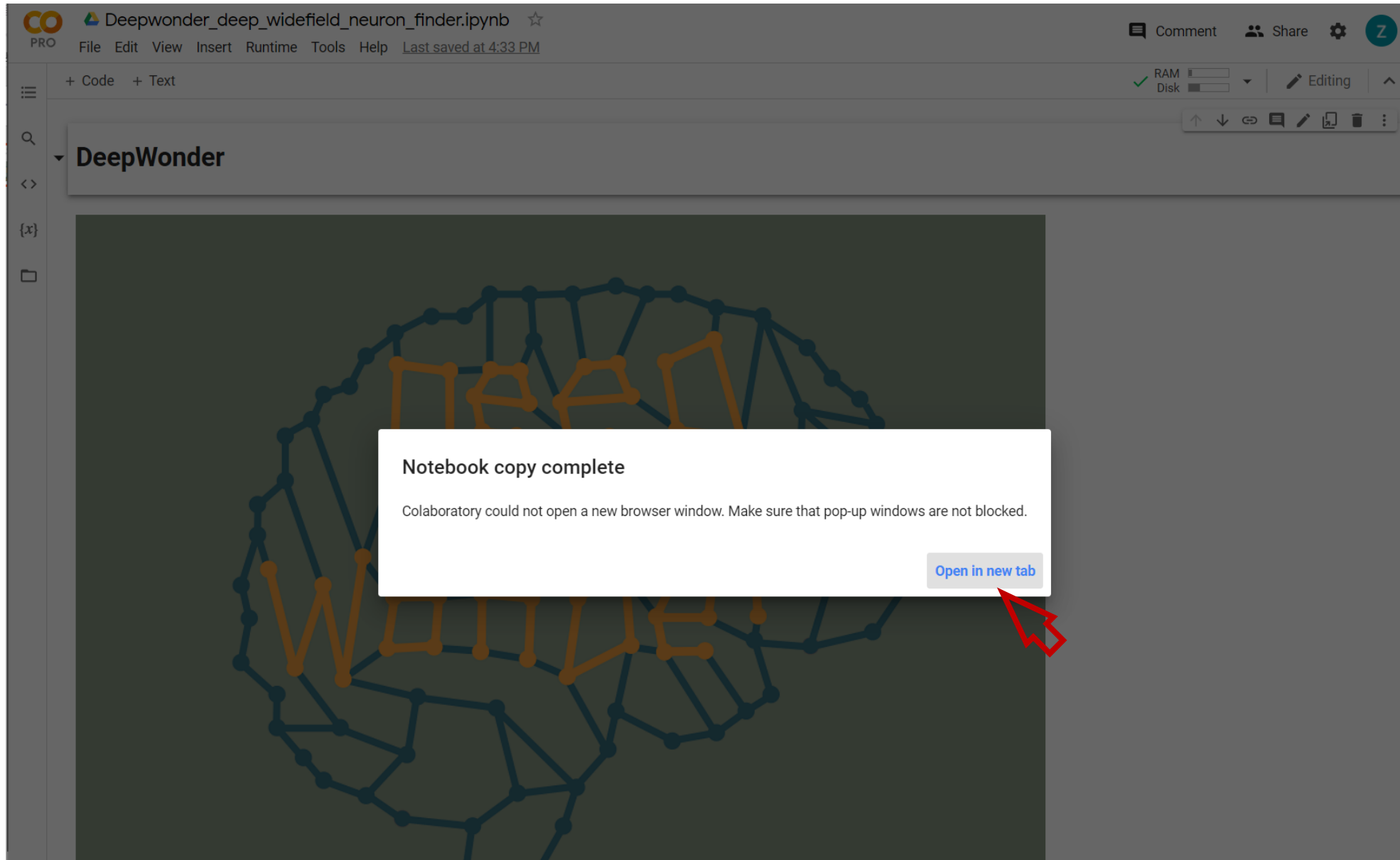
Save and pin revision Ctrl+M S

Revision history

Download

Print Ctrl+P

# Save a copy of the Colab notebook into your Google drive.



# Rename the file according to your preference

The screenshot displays the JupyterLab web interface. At the top, the browser address bar shows the file name 'My Copy of Deepwonder deep widefield neuron finder.ipynb', which is highlighted by a red box and a red arrow pointing to it. Below the address bar, the JupyterLab menu bar includes 'File', 'Edit', 'View', 'Insert', 'Runtime', 'Tools', and 'Help'. The right side of the interface features a toolbar with icons for 'Comment', 'Share', 'Settings', and a user profile icon labeled 'Z'. The main workspace area is titled 'DeepWonder' and contains a large visualization of a brain. The brain is rendered with a dark green background and a network of blue lines representing neural connections. Several specific pathways are highlighted in orange, forming a complex pattern across the brain's surface. The left sidebar shows a file explorer with a search icon and a list of files, including one named 'x'.

# Download the demo data

1.Synthetic widefield data by NAOMi1p code:

<https://drive.google.com/drive/folders/1WiTrL5gRuMUssMYt2uDRDO-5pmmrdNSc?usp=sharing>

2.Cropped RUSH data:

[https://drive.google.com/drive/folders/1CP6CuAmOkAx\\_hoAhT4h-Pd1o\\_FTcva9M?usp=sharing](https://drive.google.com/drive/folders/1CP6CuAmOkAx_hoAhT4h-Pd1o_FTcva9M?usp=sharing)

3.Widefield data jointly with two-photon ground truth:

<https://drive.google.com/drive/folders/1QSqbNWmZTlbctYt0Vh0I529gt-kYNX4w?usp=sharing>

# Download the demo data

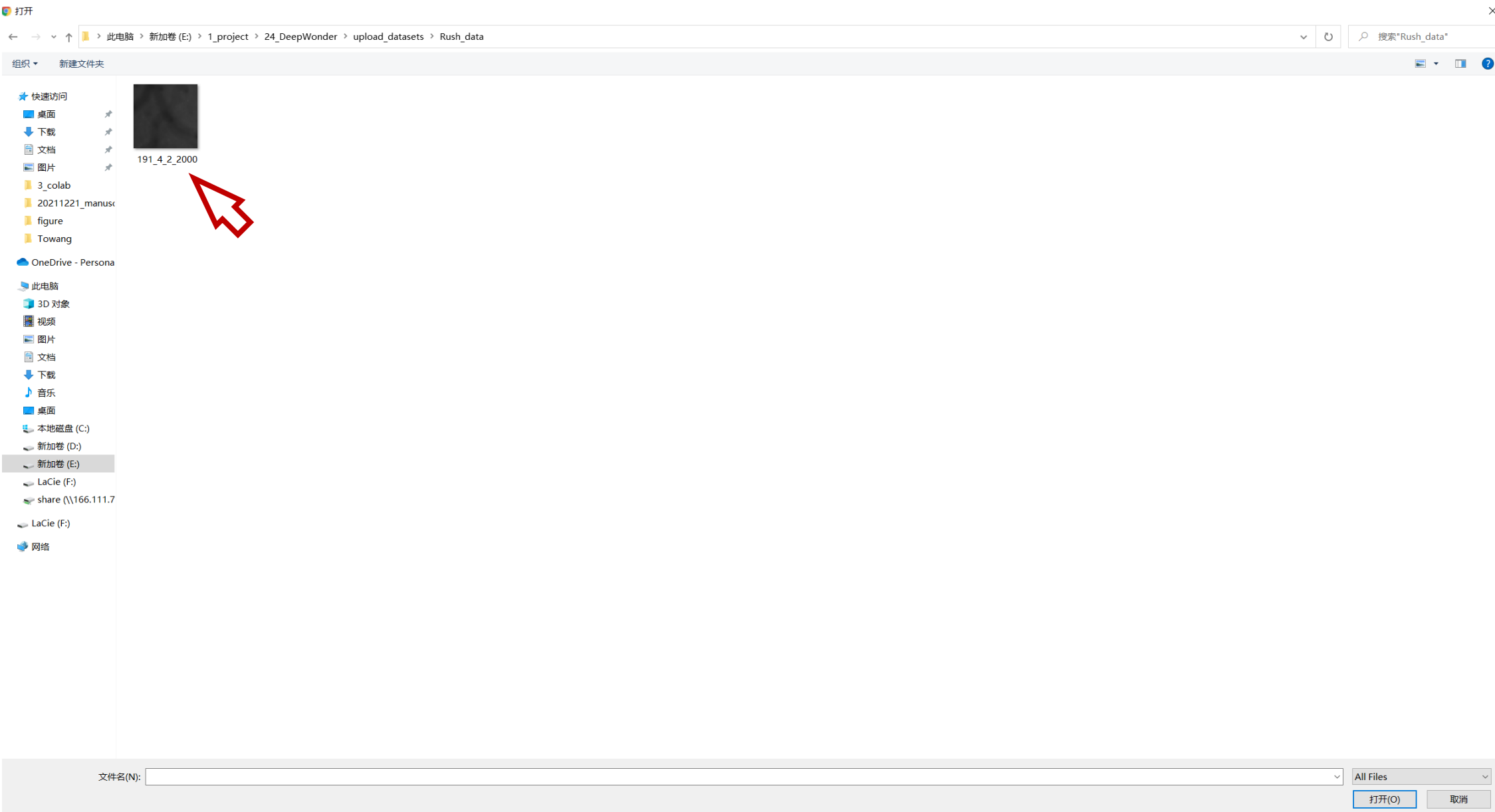
The screenshot shows the Google Drive web interface. On the left sidebar, there are navigation options: '新建' (New), '我的云端硬盘' (My Drive), '计算机' (Computer), '与我共享' (Shared with me), '最近用过' (Recent), '已加星标' (Starred), '回收站' (Trash), and '存储空间' (Storage) with a progress bar showing '已使用 2.92 GB, 共 15 GB' and a '购买存储空间' (Buy storage space) button.

The main area shows a breadcrumb path: '我的云端硬盘 > Colab\_Note... > Deepwonder\_d... > Simulated\_wide\_field\_da...'. Below this is a table of files. The first file, 'vol\_600\_200\_NA\_0.30\_Hz\_10...', is selected. A red arrow labeled '1' points to this file. A context menu is open over the file, listing various actions. The '下载' (Download) option is highlighted, and a red arrow labeled '2' points to it.

名称 ↑	所有者	上次修改日期	文件大小
vol_600_200_NA_0.30_Hz_10...	我	2021年9月26日	1.05 GB

- 预览
- 打开方式 >
- 共享
- 获取链接
- 显示文件位置
- 将快捷方式添加到云端硬盘 ?
- 移至
- 添加到“已加星标”
- 重命名
- 查看详细信息
- 管理版本
- 复制
- 下载
- 移除

# Upload the demo data



# Download the trained models

1. Background removing model:

<https://drive.google.com/drive/folders/1K3O1TQAOqAwwiwblF2YS90kFNAqnULwK?usp=sharing>

2. Neuron segmentation model:

<https://drive.google.com/drive/folders/1xmKZV346RgRKcyXp2HuiUTCrRVPjaoCV?usp=sharing>



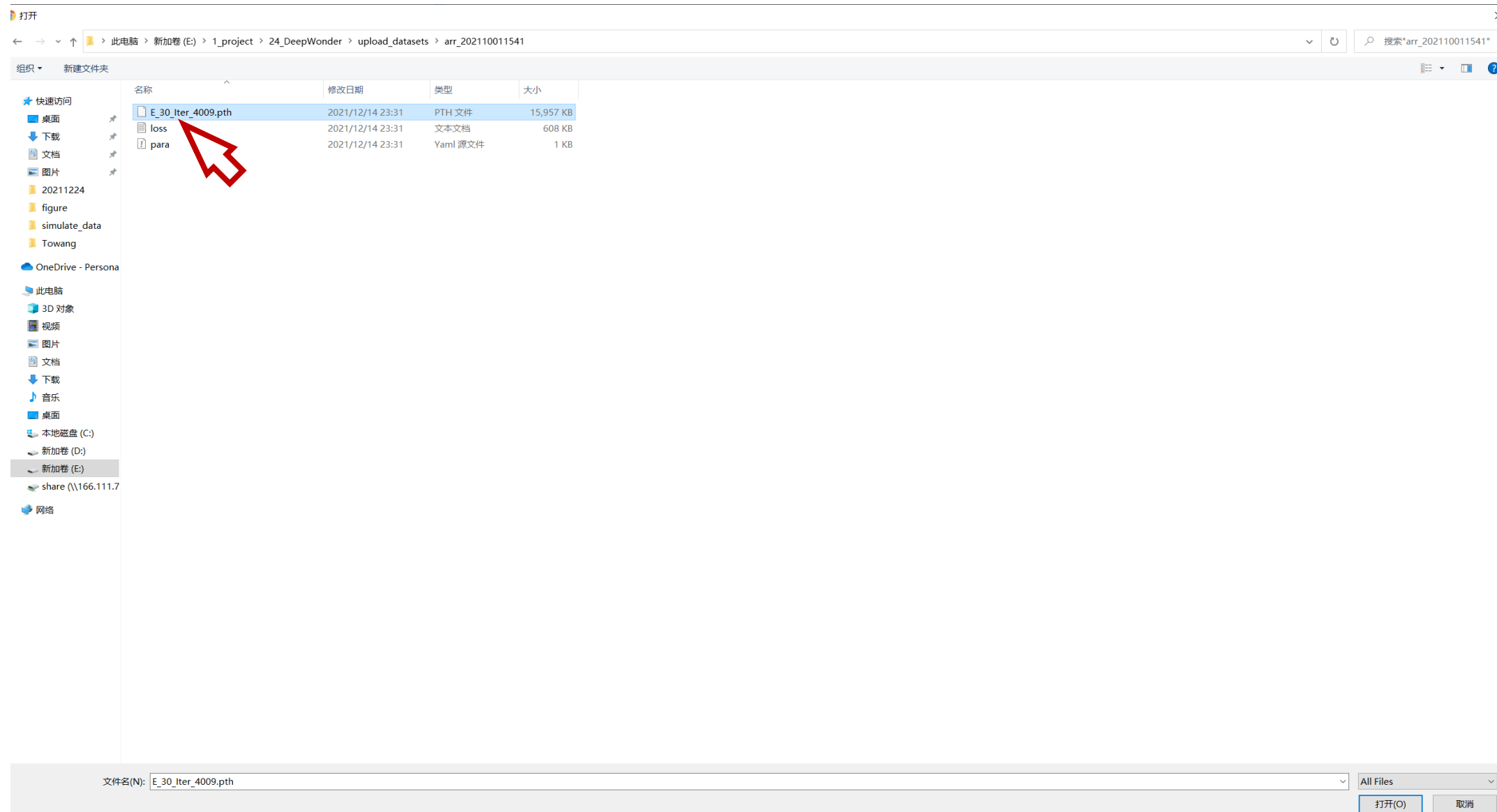
# Download the background removing model

The screenshot shows the Google Drive web interface. On the left, the sidebar includes a '新建' (New) button and a list of locations: '我的云端硬盘' (My Drive), '计算机' (Computer), '与我共享' (Shared with me), '最近用过' (Recent), '已加星标' (Starred), and '回收站' (Trash). Below this is a '存储空间' (Storage) section showing '已使用 10.32 GB, 共 15 GB' and a '购买存储空间' (Buy storage space) button.

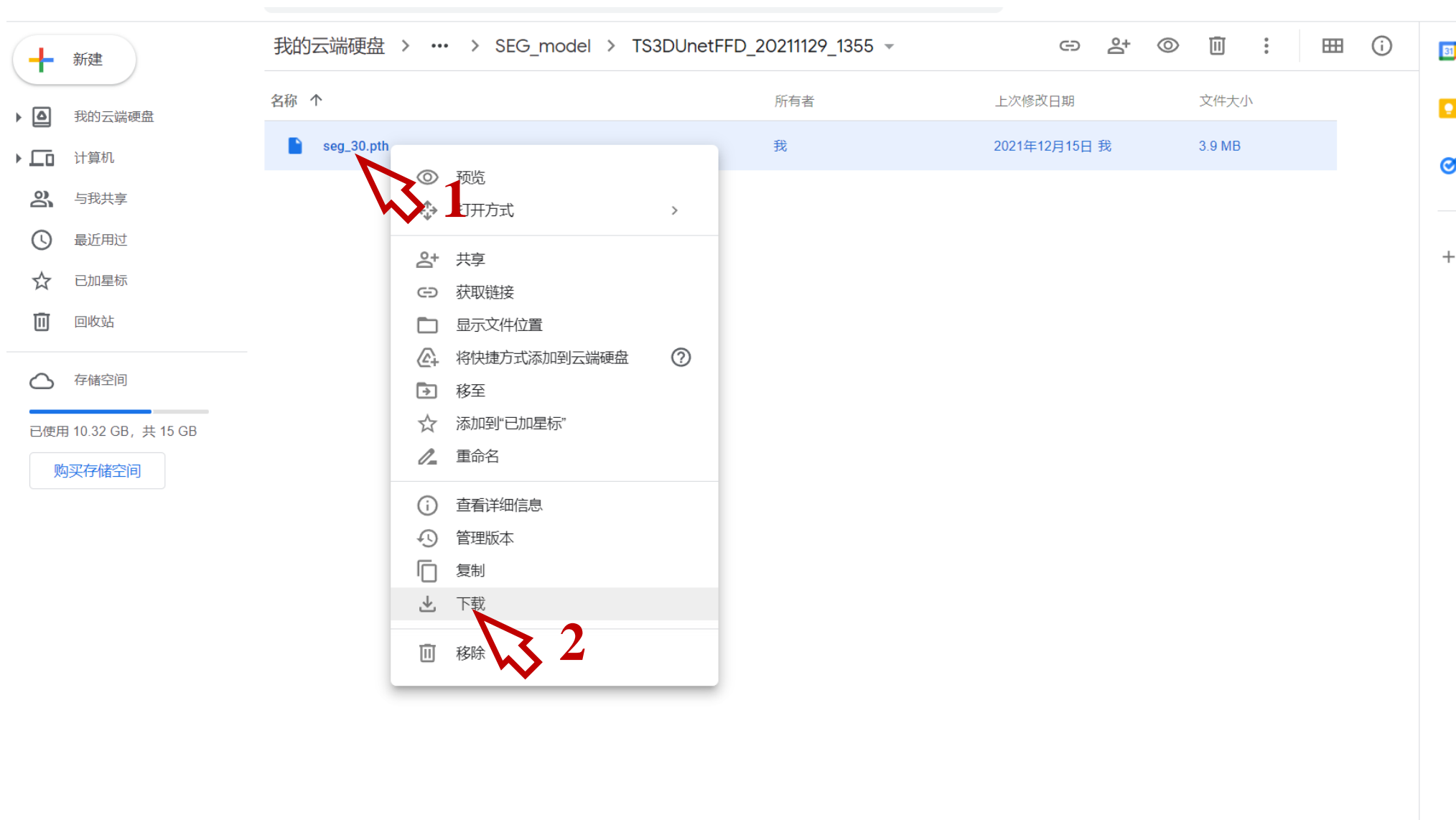
The main area shows a search bar and a breadcrumb path: '我的云端硬盘 > ... > RMBG\_model > arr\_202110011541'. A table of files is displayed with columns for '名称' (Name), '所有者' (Owner), '上次修改日期' (Last modified), and '文件大小' (File size). The first file, 'E\_30\_I...', is selected, and a context menu is open over it. The menu includes options like '预览' (Preview), '打开方式' (Open with), '共享' (Share), '获取链接' (Get link), '显示文件位置' (Show location), '将快捷方式添加到云端硬盘' (Add shortcut to Drive), '移至' (Move), '添加到“已加星标”' (Add to Starred), '重命名' (Rename), '查看详细信息' (View details), '管理版本' (Manage versions), '复制' (Copy), '下载' (Download), and '移除' (Remove). A red arrow labeled '1' points to the '打开方式' option, and another red arrow labeled '2' points to the '下载' option.

名称	所有者	上次修改日期	文件大小
E_30_I...	我	2021年12月15日 我	15.6 MB
loss.tx...	我	2021年12月15日 我	607 KB
para.y...	我	2021年12月15日 我	312 个字节

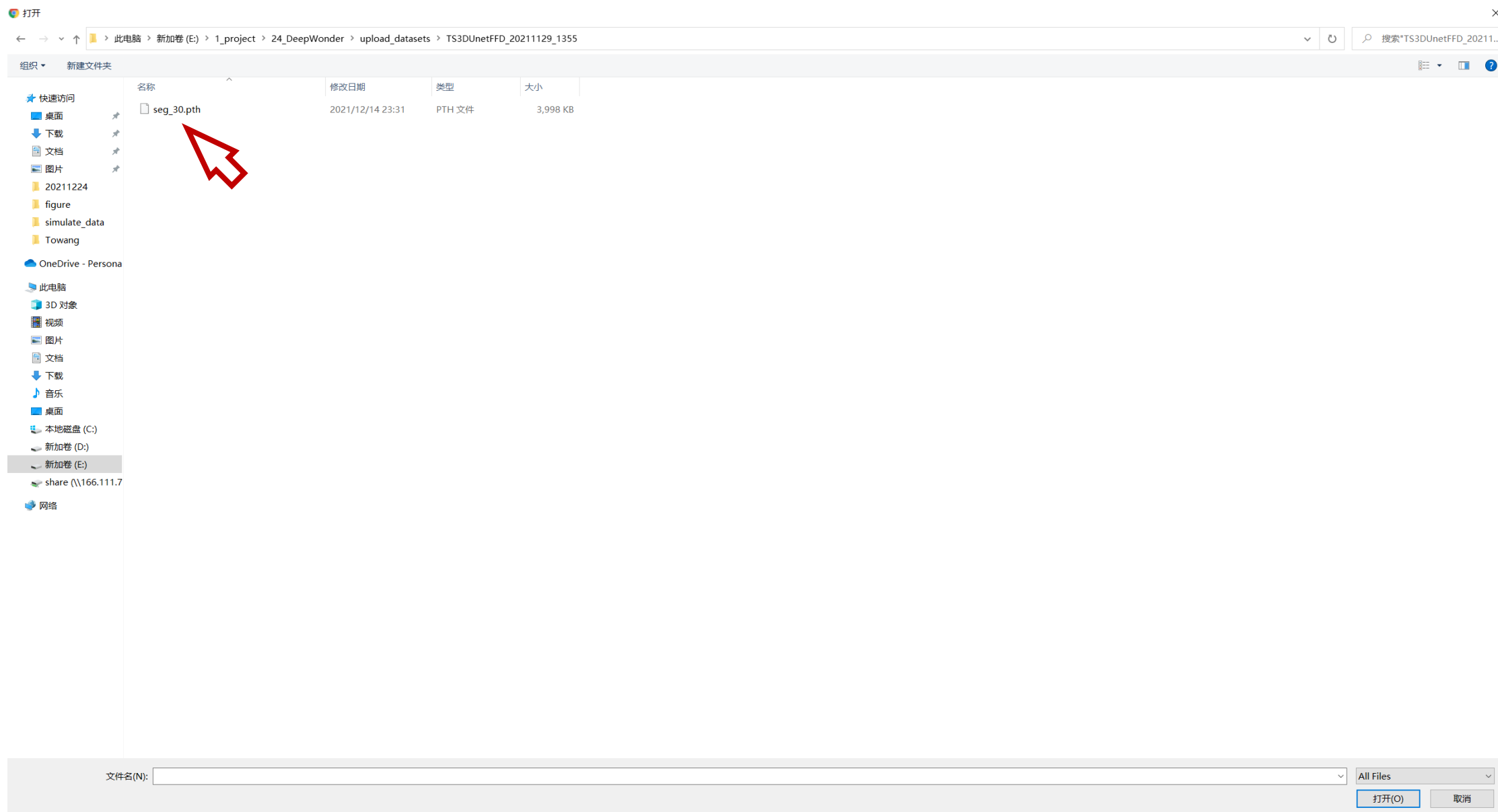
# Upload the background removing model



# Download the neuron segmentation model



# Upload the neuron segmentation model



# Clear the output from previous stage



The screenshot shows a Jupyter Notebook interface. At the top, the title bar reads "My Copy of Deepwonder\_deep\_widefield\_neuron\_finder.ipynb" with a star icon. Below the title bar is a menu bar with "File", "Edit", "View", "Insert", "Runtime", "Tools", and "Help". The "Edit" menu is open, displaying a list of options: "Select all cells" (Ctrl+Shift+A), "Cut cell or selection", "Copy cell or selection", "Paste", "Delete selected cells" (Ctrl+M D), "Find and replace" (Ctrl+H), "Find next" (Ctrl+G), "Find previous" (Ctrl+Shift+G), "Notebook settings", and "Clear all outputs". A red arrow labeled "1" points to the "Edit" menu, and another red arrow labeled "2" points to the "Clear all outputs" option. The main content area shows a network graph with blue nodes and edges, and several orange rectangular regions highlighting specific parts of the graph. On the right side of the interface, there are buttons for "Comment", "Share", and "Settings", along with a user profile icon. Below these is a "Connect" button and an "Editing" status indicator. At the bottom right, there is a toolbar with icons for navigation and editing.

# Set GPU

The image shows a Jupyter Notebook interface with the title "My Copy of Deepwonder\_deep\_widefield\_neuron\_finder.ipynb". The "Edit" menu is open, and the "Notebook settings" option is highlighted. A red arrow labeled "1" points to the "Edit" menu, and another red arrow labeled "2" points to the "Notebook settings" option. The background of the notebook displays a visualization of a neural network structure, featuring a grid of blue nodes connected by lines, with some nodes highlighted in orange.

CO PRO File Edit View Insert Runtime Tools Help [All changes saved](#) Comment Share Settings Z

+ Code

De

{x}

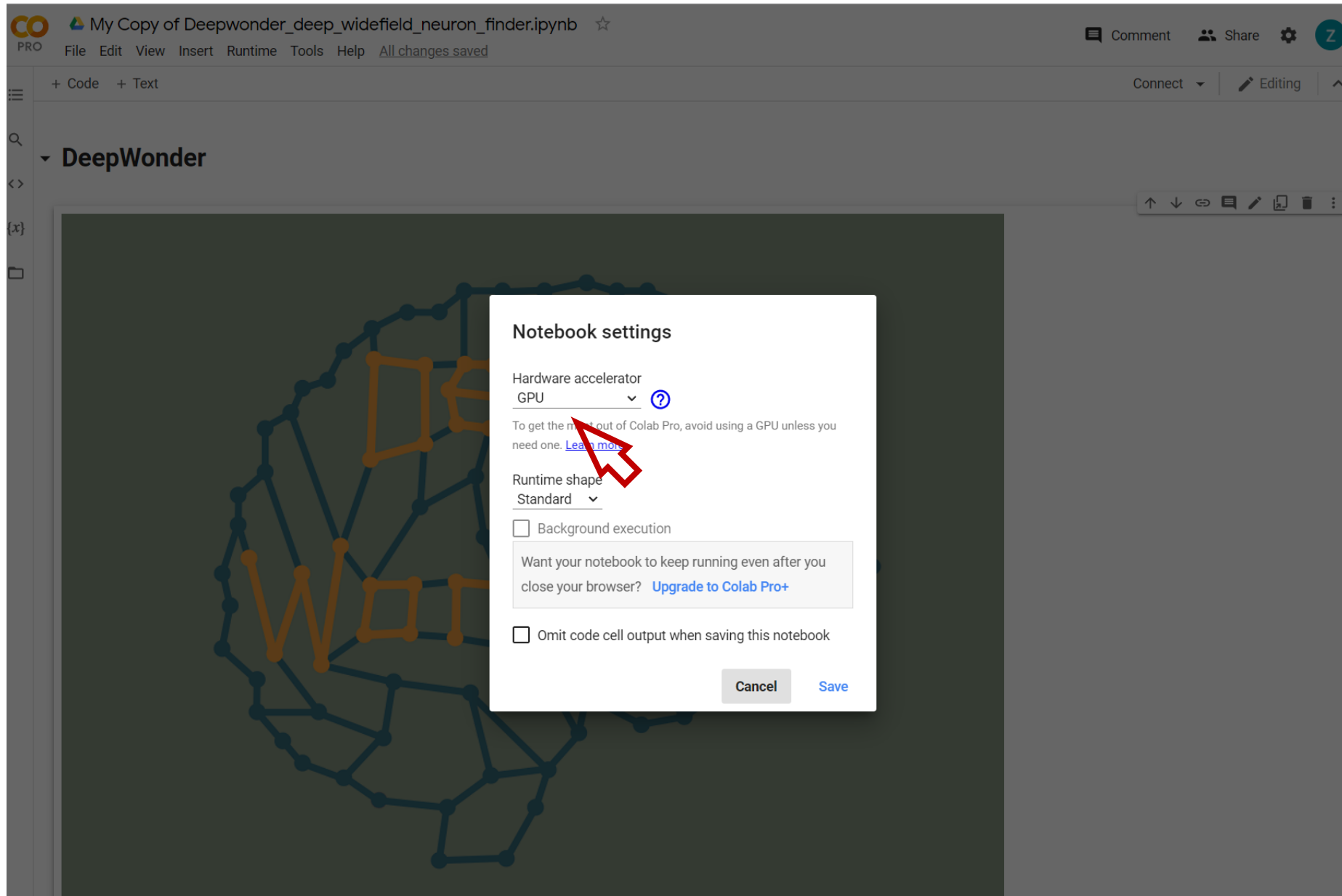
↑ ↓ ↶ ↷ ↸ ↹ ↺ ↻ ↼ ↽

Ctrl+M Z  
Ctrl+Shift+Y  
Ctrl+Shift+A  
Ctrl+M D  
Ctrl+H  
Ctrl+G  
Ctrl+Shift+G

Notebook settings

Clear all outputs

# Set GPU



The screenshot shows the Google Colab interface for a notebook titled "My Copy of Deepwonder\_deep\_widefield\_neuron\_finder.ipynb". The notebook is in "Editing" mode. A "Notebook settings" dialog box is open, displaying the following options:

- Hardware accelerator:** GPU (selected). A red arrow points to the "GPU" option in the dropdown menu.
- Runtime shape:** Standard (selected).
- ☐ Background execution
- ☐ Want your notebook to keep running even after you close your browser? [Upgrade to Colab Pro+](#)
- ☐ Omit code cell output when saving this notebook

The background of the notebook shows a neural network diagram with nodes and connections, and the word "DeepWonder" is visible in the top left corner of the notebook area.

# Install key dependencies

- ▼ **1. Install Deepwonder and dependencies**

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- ▼ **1.1. Install key dependencies**

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- ▶ Install deepwonder and dependencies



[Show code](#)



# Check whether you have GPU access

## ▼ 2. Check GPU and Google Drive

+ Code

+ Text

### ▼ 2.1. Check for GPU access

By default, the session should be using Python 3 and GPU acceleration, but it is possible to ensure that these are set properly by doing the following:

Go to **Runtime** -> **Change the Runtime type**

**Runtime type:** Python 3 *(Python 3 is programming language in which this program is written)*

**Accelerator:** GPU *(Graphics processing unit)*

▶ Run this cell to check if you have GPU access

Show code

## Check whether you have GPU access

## 2. Check GPU and Google Drive

### ▼ 2.1. Check for GPU access

By default, the session should be using Python 3 and GPU acceleration, but it is possible to ensure that these are set properly by doing the following:

Go to **Runtime** -> **Change the Runtime type**

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**Accelerator:** GPU (*Graphics processing unit*)



Run this cell to check if you have GPU access

[Show code](#)

You have GPU access  
Thu Dec 23 11:36:06 2021

NVIDIA-SMI 495.44				Driver Version: 460.32.03		CUDA Version: 11.2	
GPU	Name	Persistence-M	Bus-Id	Disp.A	Volatile	Uncorr. ECC	
Fan	Temp	Perf	Pwr:Usage/Cap	Memory-Usage	GPU-Util	Compute M.	
						MIG M.	
0	Tesla P100-PCIE...	Off	00000000:00:04.0	Off			0
N/A	39C	P0	34W / 250W	369MiB / 16280MiB	1%	Default	N/A

Processes:						
GPU	GI	CI	PID	Type	Process name	GPU Memory Usage
	ID	ID				
No running processes found						

# Mount your Google Drive


## 2.2 Mount your Google Drive

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To use this notebook on the data present in your Google Drive, you need to mount your Google Drive to this notebook.

Play the cell below to mount your Google Drive and follow the link. In the new browser window, select your drive and select 'Allow', copy the code, paste into the cell and press enter. This will give Colab access to the data on the drive.

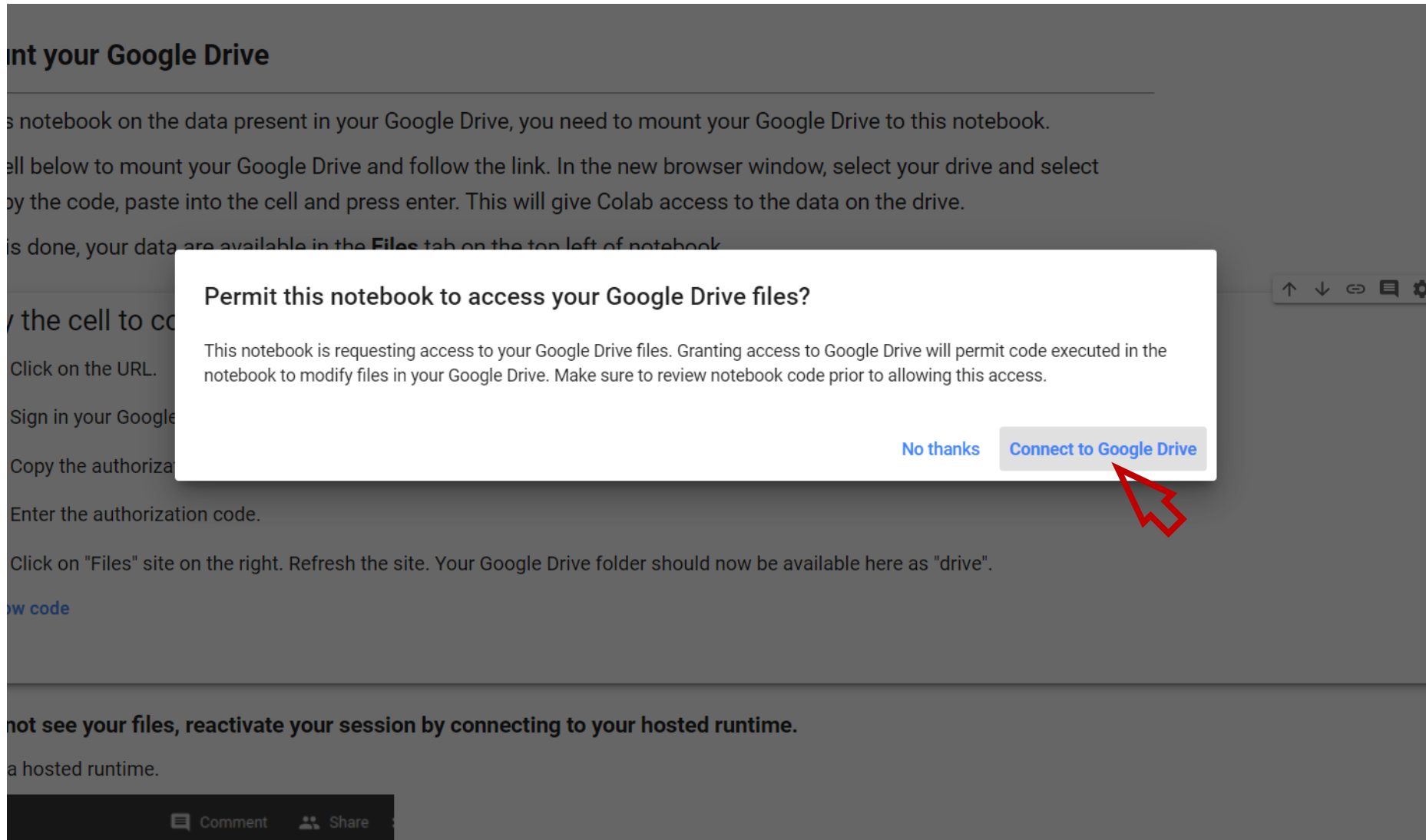
Once this is done, your data are available in the **Files** tab on the top left of notebook.

 Play the cell to connect your Google Drive to Colab

- Click on the URL.
- Sign in your Google Account.
- Copy the authorization code.
- Enter the authorization code.
- Click on "Files" site on the right. Refresh the site. Your Google Drive folder should now be available here as "drive".

[Show code](#)

# Mount your Google Drive



The screenshot shows the Google Colab interface with a modal dialog box in the center. The dialog box has a white background and a thin gray border. It contains the following text:

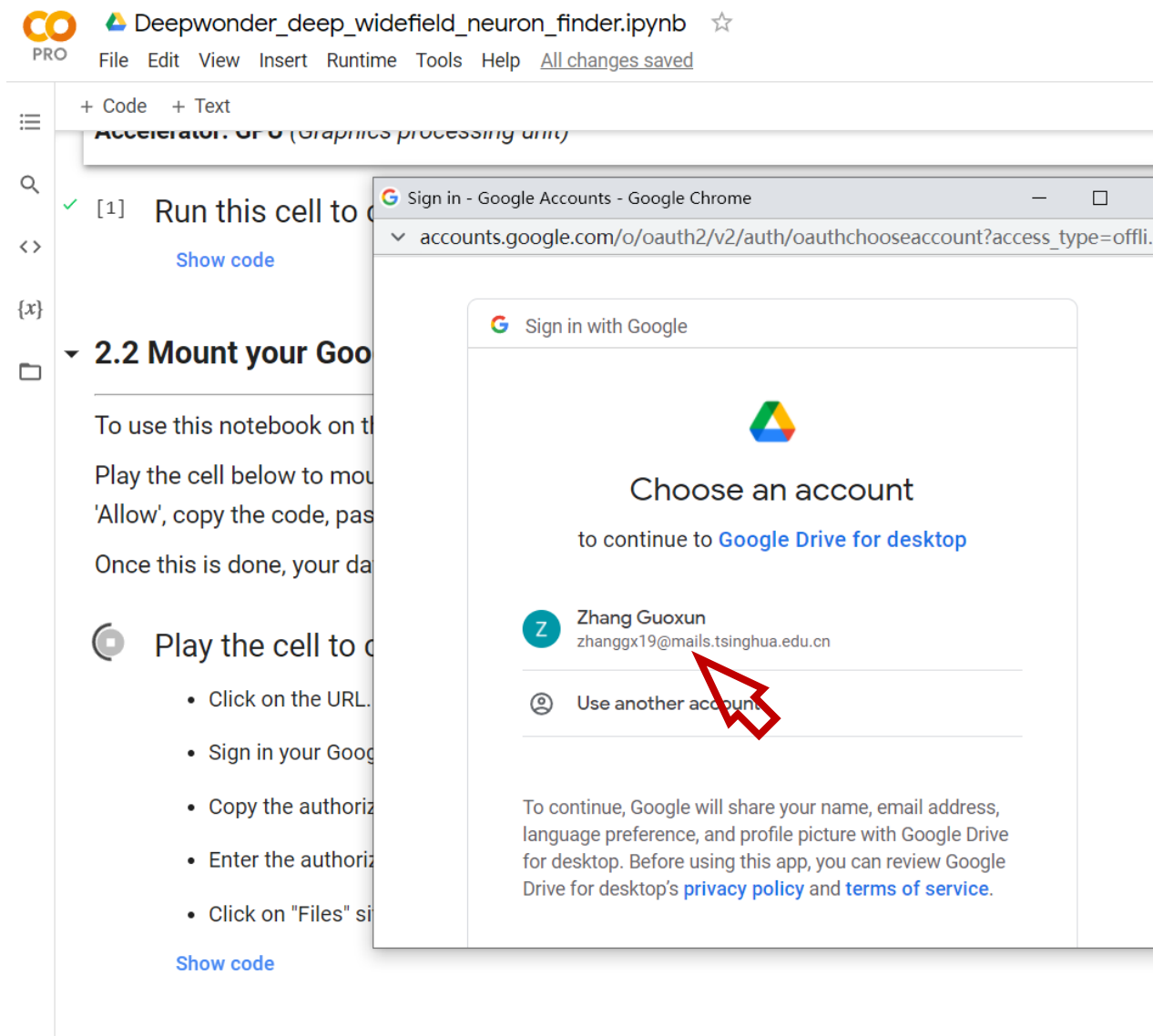
**Permit this notebook to access your Google Drive files?**

This notebook is requesting access to your Google Drive files. Granting access to Google Drive will permit code executed in the notebook to modify files in your Google Drive. Make sure to review notebook code prior to allowing this access.

At the bottom right of the dialog box, there are two buttons: "No thanks" (in blue text) and "Connect to Google Drive" (in a gray button with blue text). A red mouse cursor is pointing at the "Connect to Google Drive" button.

The background of the Colab interface is dark gray. At the top, there is a section titled "Mount your Google Drive" with instructions on how to mount Google Drive. The instructions include: "To work with this notebook on the data present in your Google Drive, you need to mount your Google Drive to this notebook. Click on the URL. Sign in your Google account. Copy the authorization code. Enter the authorization code. Click on 'Files' site on the right. Refresh the site. Your Google Drive folder should now be available here as 'drive'." Below the instructions, there is a "View code" link. At the bottom of the interface, there is a footer with "Comment" and "Share" buttons.

# Mount your Google Drive



The screenshot displays a Jupyter Notebook interface with a file named "Deepwonder\_deep\_widefield\_neuron\_finder.ipynb". The notebook contains a code cell with the instruction "Run this cell to" and a "Show code" link. Below this, a section titled "2.2 Mount your Google Drive" is visible, containing text about using the notebook on a desktop and a list of steps for mounting the drive. A "Show code" link is also present at the bottom of this section.

Overlaid on the notebook is a Google Chrome browser window showing the "Sign in with Google" page. The page prompts the user to "Choose an account" to continue to "Google Drive for desktop". Two accounts are listed: "Zhang Guoxun" (zhanggx19@mails.tsinghua.edu.cn) and "Use another account...". A red arrow points to the "Zhang Guoxun" account. Below the account list, a paragraph explains that Google will share the user's name, email address, language preference, and profile picture with Google Drive for desktop, and provides links to the "privacy policy" and "terms of service".

Accelerator: GPU (Graphics processing unit)

[1] Run this cell to [Show code](#)

2.2 Mount your Google Drive

To use this notebook on the desktop, you need to mount Google Drive. Play the cell below to mount Google Drive. Once this is done, your data will be available locally.

Play the cell to [Show code](#)

- Click on the URL.
- Sign in your Google account.
- Copy the authorization code.
- Enter the authorization code in the notebook.
- Click on "Files" sidebar in the notebook.

[Show code](#)

Sign in - Google Accounts - Google Chrome

accounts.google.com/o/oauth2/v2/auth/oauthchooseaccount?access\_type=offli..

Sign in with Google

Choose an account

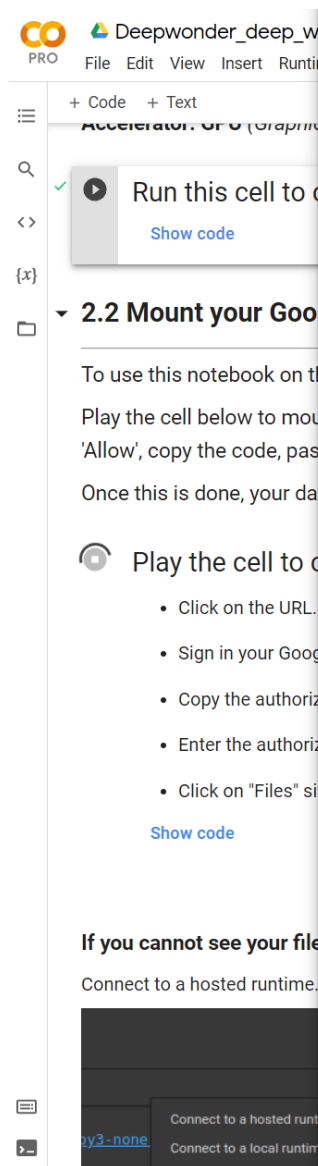
to continue to [Google Drive for desktop](#)

Zhang Guoxun  
zhanggx19@mails.tsinghua.edu.cn

Use another account...

To continue, Google will share your name, email address, language preference, and profile picture with Google Drive for desktop. Before using this app, you can review Google Drive for desktop's [privacy policy](#) and [terms of service](#).

# Mount your Google Drive



Deepwonder\_deep\_w

File Edit View Insert Runtime

+ Code + Text

Run this cell to

Show code

## 2.2 Mount your Google Drive

To use this notebook on the cloud, you need to mount your Google Drive. Play the cell below to mount your Google Drive. Once this is done, your data will be available in the notebook.

Play the cell to

- Click on the URL.
- Sign in your Google account.
- Copy the authorization code.
- Enter the authorization code in the notebook.
- Click on "Files" sidebar to see your files.

Show code

### If you cannot see your files

Connect to a hosted runtime.

Connect to a local runtime.



使用 Google 帐号登录

“Google Drive for desktop”想要访问您的 Google 帐号

zhanggx19@mails.tsinghua.edu.cn

这样即可让“Google Drive for desktop”：

- 查看、修改、创建和删除您的所有 Google 云端硬盘文件
- 查看您 Google 相册中的照片、视频和影集
- 检索移动客户端配置和实验
- 查看 Google 用户信息，如个人资料和联系人
- 查看 Google 云端硬盘中的文件的活动记录
- 查看、修改、创建和删除您的任何 Google 云端硬盘文档

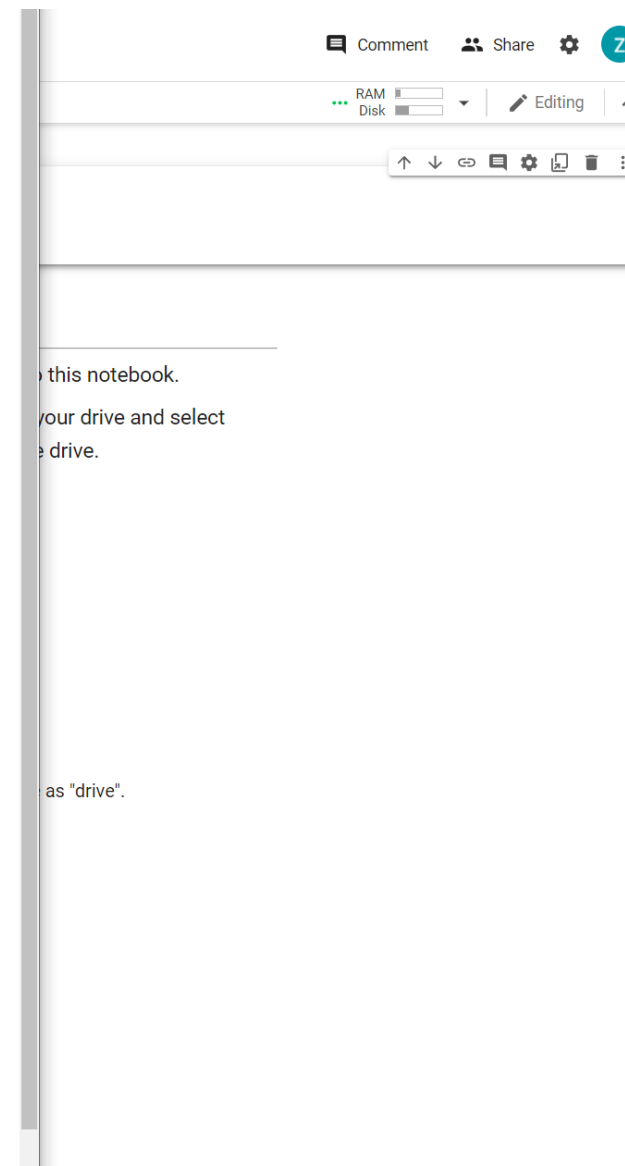
请确保您信任 Google Drive for desktop

这么做可能会将您的敏感信息提供给此网站或应用。您可以随时在 [Google 帐号](#) 页面上查看或撤销访问权限。

了解 Google 如何协助您 [安全地分享数据](#)。

查看“Google Drive for desktop”的 [隐私权政策](#) 和 [服务条款](#)。

取消 允许



Comment Share

RAM Disk

Editing

↑ ↓ ↻ ⌨ ⚙ 📄 🗑 ⋮

this notebook.

your drive and select

drive.

as "drive".

# Set the datasets path

PRO Deepwonder\_deep\_widefield\_neuron\_finder.ipynb ☆

File Edit View Insert Runtime Tools Help [All changes saved](#)

Comment Share Settings Z

RAM Disk

Editing

### 3. Run DeepWonder

Path of removing background network model:

RMBG\_model\_folder: `"/content/drive/MyDrive/Colab_Notebooks/Deepwonder_model/RMBG_model/arr_202110011541"`

Name of removing background network model:

RMBG\_model\_name: `"E_30_iter_4009"`

Path of neuron segmentation network model:

SEG\_model\_folder: `"/content/drive/MyDrive/Colab_Notebooks/Deepwonder_model/SEG_model/TS3DUnetFFD_20211129_1355"`

Name of neuron segmentation network model:

SEG\_model\_name: `"seg_30"`

Path of datasets:

datasets\_path: `"/content/drive/MyDrive/Colab_Notebooks/Deepwonder_datasets"`

Folder name of datasets:

datasets\_folder: `"1"`

Path of output folder:

output\_path: `"/content/drive/MyDrive/Colab_Notebooks/Deepwonder_results"`

The number of image for testing:

test\_datasize: `20000`

The index of GPU:

GPU: `0`

If Use GPU

If\_Use\_GPU: ☒

[Show code](#)

# Set the datasets folder

The screenshot shows a Google Colab notebook titled "Deepwonder\_deep\_widefield\_neuron\_finder.ipynb". The left sidebar displays a file explorer view of the "gdrive" directory, specifically the "MyDrive" section. The "Colab\_Notebooks" folder is expanded, showing a subfolder "Deepwonder\_datasets". Inside "Deepwonder\_datasets", the "Demo\_data" folder is highlighted with a red arrow and the number "1". The main code area on the right contains a series of configuration parameters for a deep learning model, each with a label and a text input field. A red arrow and the number "2" point to the "datasets\_folder" field, which is set to "Demo\_data". The code includes fields for removing background network models, neuron segmentation network models, dataset paths, folder names, output paths, testing parameters, and GPU settings.

PRO File Edit View Insert Runtime Tools Help Saving...

Comment Share Settings Z

RAM Disk

Editing

Files

gdrive

MyDrive

Colab Notebooks

Colab\_Notebooks

Deepwonder\_datasets

1

Demo\_data

Rush\_data

Rush\_data

Simulated\_wide\_field...

Simulated\_wide\_field...

Wide\_field\_data1

Wide\_field\_data2

Wide\_field\_data2\_RM...

Wide\_field\_data2\_ref2p

Deepwonder\_img

Deepwonder\_model

Deepwonder\_results

Noise2Void\_2D

Stardist

test\_colab

Deepwonder\_deep\_widefi...

Deepwonder\_test.ipynb

My Copy of StarDist\_2D\_Z...

My DecoNoising\_2D\_Zero...

sample\_data

Path of removing background network model:

RMBG\_model\_folder: "/content/gdrive/MyDrive/Colab\_Notebooks/Deepwonder\_model/RMBG\_model/arr\_202110011541"

Name of removing background network model:

RMBG\_model\_name: "E\_30\_Iter\_4009"

Path of neuron segmentation network model:

SEG\_model\_folder: "/content/gdrive/MyDrive/Colab\_Notebooks/Deepwonder\_model/SEG\_model/TS3DUnetFFD\_20211129\_1355"

Name of neuron segmentation network model:

SEG\_model\_name: "seg\_30"

Path of datasets:

datasets\_path: "/content/gdrive/MyDrive/Colab\_Notebooks/Deepwonder\_datasets"

Folder name of datasets:

datasets\_folder: "Demo\_data"

Path of output folder:

output\_path: "/content/gdrive/MyDrive/Colab\_Notebooks/Deepwonder\_results"

The number of image for testing:

test\_datasize: 20000

The index of GPU:

GPU: 0

If Use GPU

If\_Use\_GPU: ☒

Show code

9s completed at 4:31 PM



# Set the background removing model path

Deepwonder\_deep\_widefield\_neuron\_finder.ipynb ☆

File Edit View Insert Runtime Tools Help Save failed

Comment Share Settings

RAM Disk Editing

Files

- gdrive
  - MyDrive
    - Colab Notebooks
    - Colab Notebooks
    - Deepwonder\_datasets
    - Deepwonder\_img
    - Deepwonder\_model
      - RMBG\_model
        - arr\_202110011541

Path of removing background network model:

RMBG\_model\_folder: `"/content/gdrive/MyDrive/Colab_Notebooks/Deepwonder_model/RMBG_model/arr_202110011541"`

Name of removing background network model:

RMBG\_model\_name: `"E_30_iter_4009"`

Path of neuron segmentation network model:

SEG\_model\_folder: `"/content/gdrive/MyDrive/Colab_Notebooks/Deepwonder_model/SEG_model/TS3DUnetFFD_20211129_1355"`

Name of neuron segmentation network model:

SEG\_model\_name: `"seg_30"`

Path of datasets:

datasets\_path: `"/content/gdrive/MyDrive/Colab_Notebooks/Deepwonder_datasets"`

Folder name of datasets:

datasets\_folder: `"Demo_data"`

Path of output folder:

output\_path: `"/content/gdrive/MyDrive/Colab_Notebooks/Deepwonder_results"`

The number of image for testing:

test\_datasize: `20000`

The index of GPU:

GPU: `0`

If Use GPU

If\_Use\_GPU: ☒

Show code

1

2

3

## Set the background removing model name

The screenshot displays a Google Colab notebook titled "Deepwonder\_deep\_widefield\_neuron\_finder.ipynb". The left sidebar shows the file explorer with a directory structure: "gdrive" -> "MyDrive" -> "Colab Notebooks" -> "Colab\_Notebooks" -> "Deepwonder\_datasets", "Deepwonder\_img", "Deepwonder\_model", "RMBG\_model", and "arr\_202110011541". The "RMBG\_model" folder is expanded, showing "E\_30\_iter\_4009.pth" (15.58M) and "loss.txt". A red arrow points to the "E\_30\_iter\_4009.pth" file. The main area shows the code execution output for the "Path of removing background network model:" section. The output includes the following parameters:

- RMBG\_model\_folder: "/content/gdrive/MyDrive/Colab\_Notebooks/Deepwonder\_model/RMBG\_model/arr\_202110011541"
- Name of removing background network model: RMBG\_model\_name: "E\_30\_iter\_4009"
- Path of neuron segmentation network model: SEG\_model\_folder: "/content/gdrive/MyDrive/Colab\_Notebooks/Deepwonder\_model/SEG\_model/TS3DUnetFFD\_20211129\_1355"
- Name of neuron segmentation network model: SEG\_model\_name: "seg\_30"
- datasets\_path: "/content/gdrive/MyDrive/Colab\_Notebooks/Deepwonder\_datasets"
- Folder name of datasets: datasets\_folder: "Demo\_data"
- Path of output folder: output\_path: "/content/gdrive/MyDrive/Colab\_Notebooks/Deepwonder\_results"
- The number of image for testing: test\_datasize: 20000
- The index of GPU: GPU: 0
- If Use GPU: If\_Use\_GPU: ☒

A red arrow points to the "E\_30\_iter\_4009.pth" file in the file explorer, and another red arrow points to the "E\_30\_iter\_4009" value in the "Name of removing background network model:" output.

# Set the neuron segmentation model path

Deepwonder\_deep\_widefield\_neuron\_finder.ipynb

File Edit View Insert Runtime Tools Help Save failed

Comment Share Settings

RAM Disk

Editing

Files

gdrive

MyDrive

Colab Notebooks

Colab Notebooks

Deepwonder\_datasets

Deepwonder\_img

Deepwonder\_model

RMBG\_model

arr\_202110011541

E\_30\_iter\_4009...

loss.txt

para.yaml

demo\_trained\_mo...

SEG\_model

TS3DUnetFFD\_20211129\_1355

demo\_trained\_mo...

Deepwonder

Noise2Voice

Stardist

test\_colab

Deepwonder

Deepwonder

My Copy of

My DecoN

sample\_data

Path of removing background network model:

RMBG\_model\_folder: "/content/gdrive/MyDrive/Colab\_Notebooks/Deepwonder\_model/RMBG\_model/arr\_202110011541"

Name of removing background network model:

RMBG\_model\_name: "E\_30\_iter\_4009"

Path of neuron segmentation network model:

SEG\_model\_folder: "/content/gdrive/MyDrive/Colab\_Notebooks/Deepwonder\_model/SEG\_model/TS3DUnetFFD\_20211129\_1355"

Name of neuron segmentation network model:

SEG\_model\_name: "seg\_30"

Path of datasets:

datasets\_path: "/content/gdrive/MyDrive/Colab\_Notebooks/Deepwonder\_datasets"

Folder name of datasets:

datasets\_folder: "Demo\_data"

Path of output folder:

output\_path: "/content/gdrive/MyDrive/Colab\_Notebooks/Deepwonder\_results"

Number of image for testing:

test\_datasize: 20000

GPU index of GPU:

GPU: 0

If Use GPU

If\_Use\_GPU: ☒

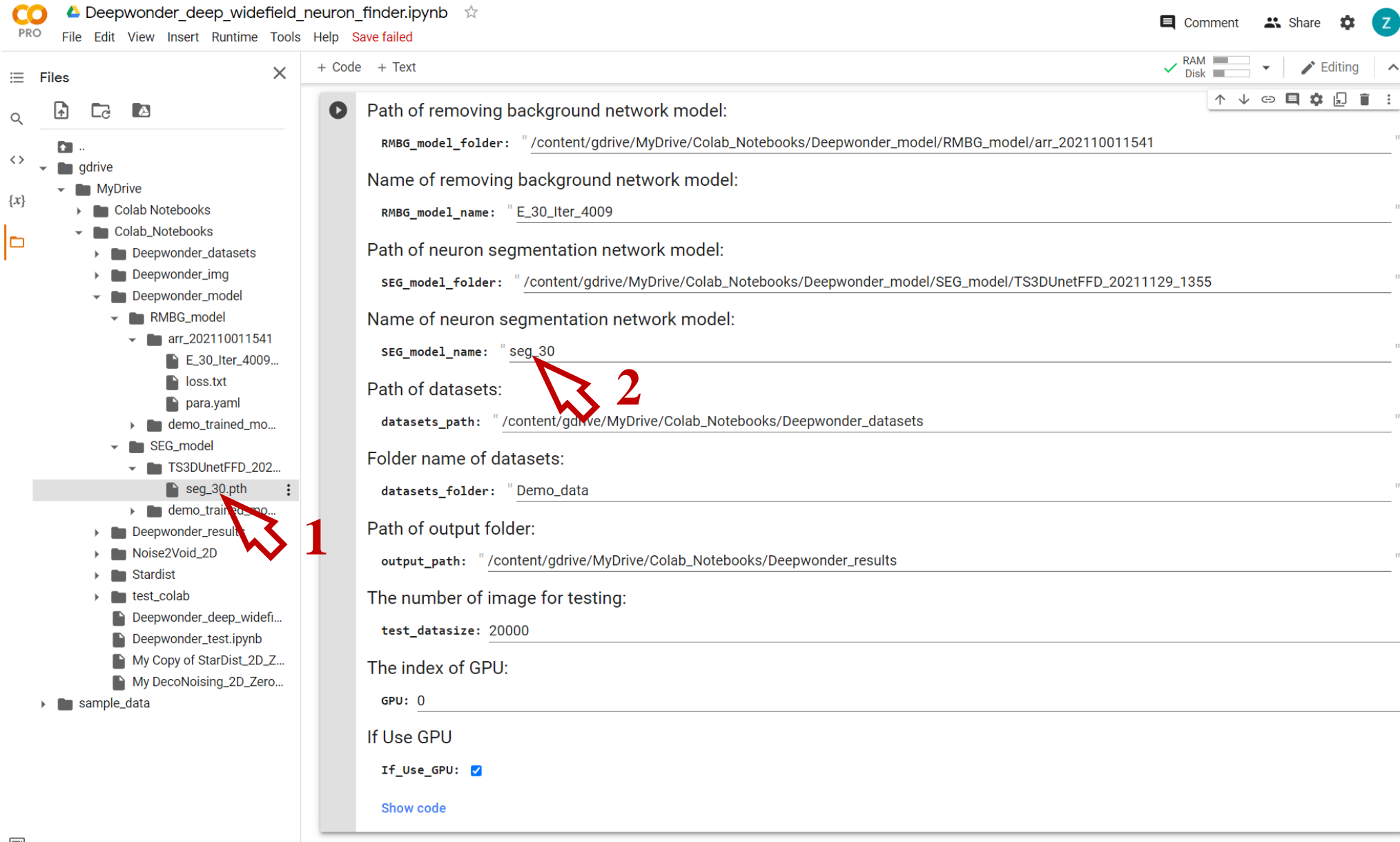
Show code

1

2

3

# Set the neuron segmentation model name



The screenshot displays a Google Colab notebook titled "Deepwonder\_deep\_widefield\_neuron\_finder.ipynb". The left sidebar shows a file explorer with a directory structure under "gdrive/MyDrive/Colab Notebooks/Colab\_Notebooks/Deepwonder\_model". The "RMBG\_model" folder is expanded, showing subfolders "arr\_202110011541" and "E\_30\_iter\_4009...". The file "seg\_30.pth" is highlighted, with a red arrow and the number "1" pointing to it.

The main code editor area contains the following configuration parameters:

- Path of removing background network model:  
`RMBG_model_folder: "/content/gdrive/MyDrive/Colab_Notebooks/Deepwonder_model/RMBG_model/arr_202110011541"`
- Name of removing background network model:  
`RMBG_model_name: "E_30_iter_4009"`
- Path of neuron segmentation network model:  
`SEG_model_folder: "/content/gdrive/MyDrive/Colab_Notebooks/Deepwonder_model/SEG_model/TS3DUnetFFD_20211129_1355"`
- Name of neuron segmentation network model:  
`SEG_model_name: "seg_30"`
- Path of datasets:  
`datasets_path: "/content/gdrive/MyDrive/Colab_Notebooks/Deepwonder_datasets"`
- Folder name of datasets:  
`datasets_folder: "Demo_data"`
- Path of output folder:  
`output_path: "/content/gdrive/MyDrive/Colab_Notebooks/Deepwonder_results"`
- The number of image for testing:  
`test_datasize: 20000`
- The index of GPU:  
`GPU: 0`
- If Use GPU:  
`If_Use_GPU: ☒`

A red arrow and the number "2" point to the "seg\_30" value in the "SEG\_model\_name" field.

At the bottom left, there is a "Show code" link.

# Set the results path

The screenshot shows a Google Colab notebook titled "Deepwonder\_deep\_widefield\_neuron\_finder.ipynb". The interface includes a top menu bar with "File", "Edit", "View", "Insert", "Runtime", "Tools", and "Help". A status bar at the top right shows "Comment", "Share", and a user profile icon. The left sidebar displays a file explorer with a tree view showing the directory structure: "gdrive" > "MyDrive" > "Colab Notebooks" > "Colab\_Notebooks" > "Deepwonder\_datasets", "Deepwonder\_img", "Deepwonder\_model", and "Deepwonder\_results". A context menu is open over the "Deepwonder\_results" folder, with red arrows and numbers indicating actions: "1" points to the "Copy path" option, and "2" points to the "Refresh" option. The main code area contains several text input fields for configuration parameters, with red arrows and numbers indicating specific values: "3" points to the "output\_path" field, which is set to "/content/gdrive/MyDrive/Colab\_Notebooks/Deepwonder\_results". The code also sets "RMBG\_model\_folder", "RMBG\_model\_name", "SEG\_model\_folder", "SEG\_model\_name", "datasets\_path", "datasets\_folder", "test\_datasize", and "GPU" index. The "If Use GPU" checkbox is checked.

Path of removing background network model:

RMBG\_model\_folder: "/content/gdrive/MyDrive/Colab\_Notebooks/Deepwonder\_model/RMBG\_model/arr\_202110011541"

Name of removing background network model:

RMBG\_model\_name: "E\_30\_iter\_4009"

Path of neuron segmentation network model:

SEG\_model\_folder: "/content/gdrive/MyDrive/Colab\_Notebooks/Deepwonder\_model/SEG\_model/TS3DUnetFFD\_20211129\_1355"

Name of neuron segmentation network model:

SEG\_model\_name: "seg\_30"

Path of datasets:

datasets\_path: "/content/gdrive/MyDrive/Colab\_Notebooks/Deepwonder\_datasets"

Folder name of datasets:

datasets\_folder: "Demo\_data"

Path of output folder:

output\_path: "/content/gdrive/MyDrive/Colab\_Notebooks/Deepwonder\_results"

The number of image for testing:

test\_datasize: 20000

The index of GPU:

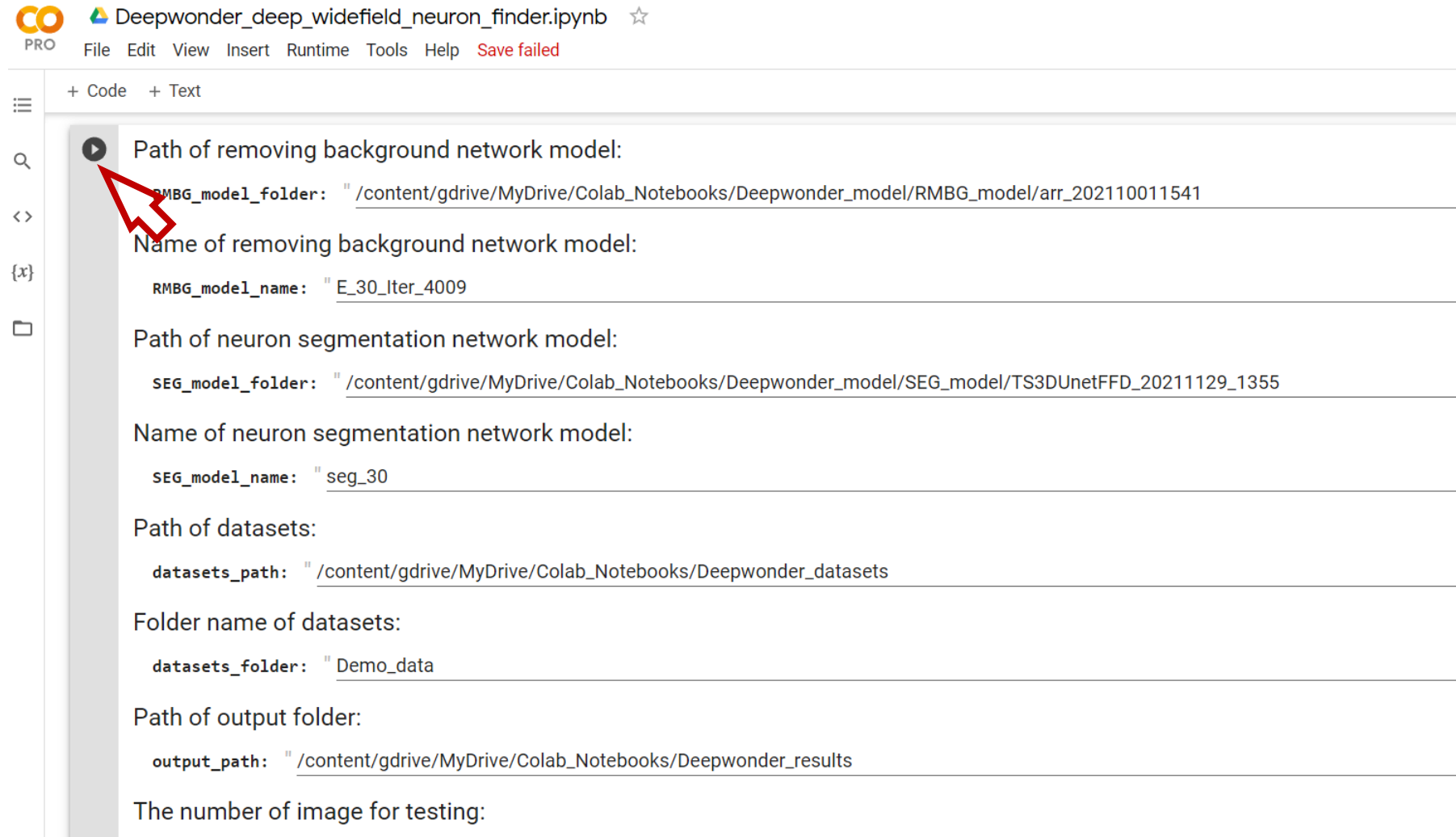
GPU: 0

If Use GPU

If\_Use\_GPU: ☒

[Show code](#)

# Run the code



The screenshot shows a Google Colab notebook titled "Deepwonder\_deep\_widefield\_neuron\_finder.ipynb". The interface includes a top menu bar with "File", "Edit", "View", "Insert", "Runtime", "Tools", "Help", and a "Save failed" status. Below the menu is a toolbar with "+ Code" and "+ Text" buttons. On the left side, there is a sidebar with icons for file explorer, search, and other functions. The main area displays a code cell with the following text:

```
Path of removing background network model:  
RMBG_model_folder: "/content/gdrive/MyDrive/Colab_Notebooks/Deepwonder_model/RMBG_model/arr_202110011541"  
  
Name of removing background network model:  
RMBG_model_name: "E_30_iter_4009"  
  
Path of neuron segmentation network model:  
SEG_model_folder: "/content/gdrive/MyDrive/Colab_Notebooks/Deepwonder_model/SEG_model/TS3DUnetFFD_20211129_1355"  
  
Name of neuron segmentation network model:  
SEG_model_name: "seg_30"  
  
Path of datasets:  
datasets_path: "/content/gdrive/MyDrive/Colab_Notebooks/Deepwonder_datasets"  
  
Folder name of datasets:  
datasets_folder: "Demo_data"  
  
Path of output folder:  
output_path: "/content/gdrive/MyDrive/Colab_Notebooks/Deepwonder_results"  
  
The number of image for testing:
```

A red arrow points to the play button icon at the start of the code cell, indicating where to click to run the code.