The Interface

Gradio can wrap almost any Python function with an easy to use interface. That function could be anything from a simple tax calculator to a pretrained model.

The core `Interface` class is initialized with three parameters:

- `fn`: the function to wrap
- `inputs`: the input component type(s)
- `outputs`: the output component type(s)

With these three arguments, we can quickly create interfaces and `launch()` them. But what if you want to change how the UI components look or behave?

Customizable Components

What if we wanted to customize the input text field - for example, we wanted it to be larger and have a text hint? If we use the actual input class for `Textbox` instead of using the string shortcut, we have access to much more customizability. To see a list of all the components we support and how you can customize them, check out the Docs

```
import gradio as gr

def greet(name):
  return "Hello " + name + "!"

iface = gr.Interface(
  fn=greet,
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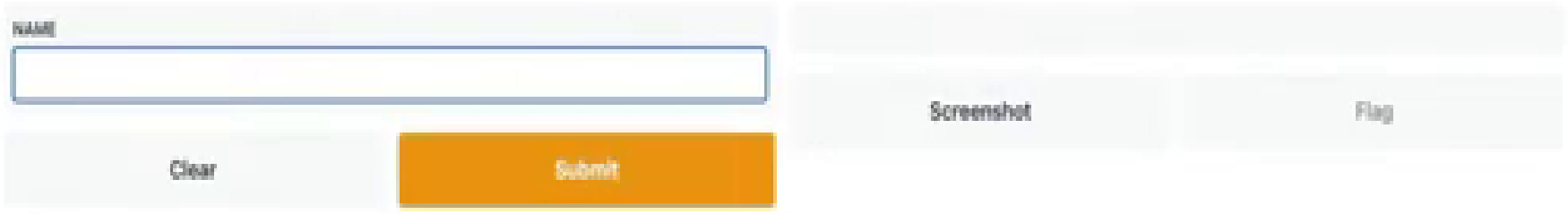
  fn=greet,
  inputs=gr.inputs.Textbox(lines=2, placeholder="Name Here..."),
  outputs="text")
iface.launch()
```

```
import gradio as gr

def greet(name):
  return "Hello " + name + "!!"

iface = gr.Interface(fn=greet, inputs="text", outputs="text")
iface.launch()
```

3. The interface below will appear automatically within the Python notebook, or pop in a browser on http://localhost:7860 if running from a script.



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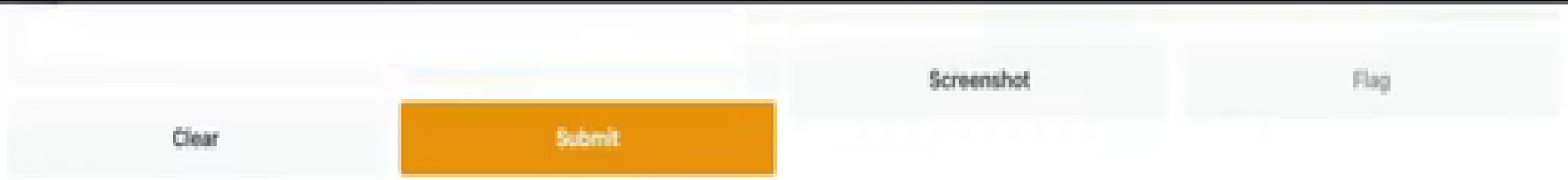

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```

1. Install Gradio from pip.

```
pip install gradio
```

2. Run the code below as a Python script or in a Python notebook (or in a colab notebook).

```
import gradio as gr

def greet(name):
  return "Hello " + name + "!!"

iface = gr.Interface(fn=greet, inputs="text", outputs="text")
iface.launch()
```

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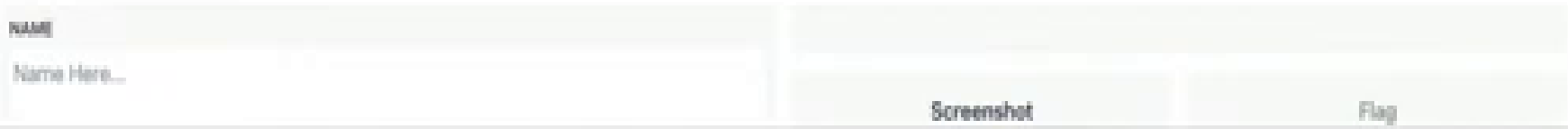

```
import gradio as gr

def greet(name):
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iface = gr.Interface(fn=greet, inputs="text", outputs="text")
iface.launch()
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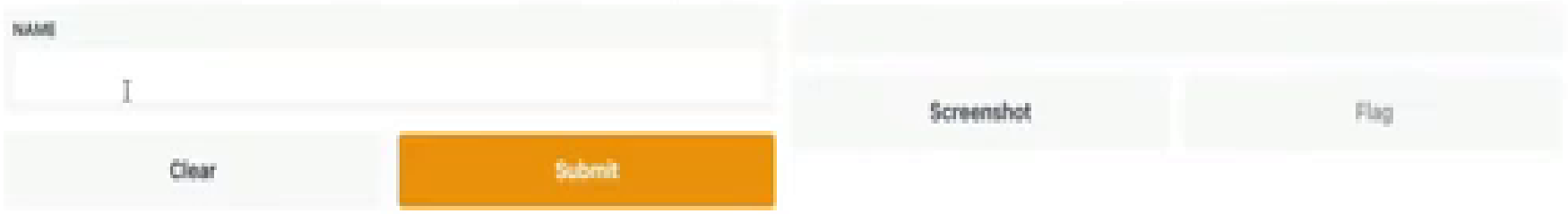

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Multiple Inputs and Outputs

- `inputs`: the input component type(s)
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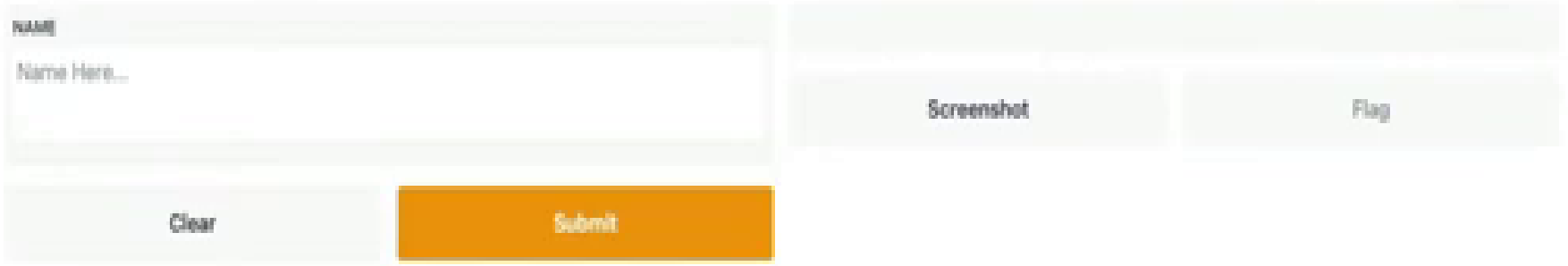

Multiple Inputs and Outputs

- outputs: the output component type(s)

With these three arguments, we can quickly create interfaces and `launch()` them. But what if you want to change how the UI components look or behave?

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What if we wanted to customize the input text field - for example, we wanted it to be larger and have a text hint? If we use the actual input class for `Textbox` instead of using the string shortcut, we have access to much more customizability. To see a list of all the components we support and how you can customize them, check out the **Docs**

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iface = gr.Interface(
  fn=greet,
  inputs=gr.inputs.Textbox(lines=2, placeholder="Name Here..."),
  outputs="text")
iface.launch()
```

Multiple Inputs and Outputs

Let's say we had a much more complex function, with multiple inputs and outputs. In the example below, we have a function that takes a string, boolean, and number, and returns a string

00:02:09

Building your first Gradio Web app

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RAM Disk Editing

```
interface = gr.Interface(fn = hello_world, inputs = 'text', outputs = "text")
```

```
interface.launch()
```

```
Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
Running on public URL: https://31668.gradio.app

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```

NAME

Gradio

OUTPUT 0.00s

Hello.... ...Gradio !!!!

Clear Submit Screenshot Flag

2s completed at 4:47 PM

00:02:16

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[10]

view the api | built with

```
(<Flask 'gradio.networking'>,
 'http://127.0.0.1:7860/',
 'https://31668.gradio.app')
```

```
interface = gr.Interface(fn = hello_world, inputs = 'text', outputs = "text")
```

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[10]

view the api | built with

```
(<Flask 'gradio.networking'>,
 'http://127.0.0.1:7860/',
 'https://31668.gradio.app')
```

```
interface = gr.Interface(fn = hello_world,
                         inputs = 'text',
                         outputs = 'text')
```

2s completed at 4:47 PM

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```
[9] interface = gr.Interface(fn = hello_world, inputs = 'text', outputs = "text")
```

```
interface.launch()
```

```
Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
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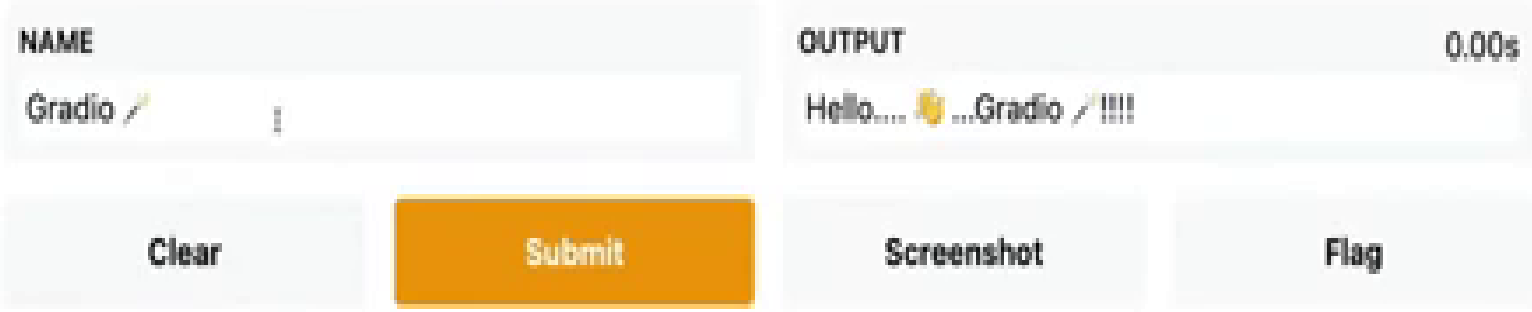
```



2s completed at 4:47 PM

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[10]

```
(<Flask 'gradio.networking'>,
 'http://127.0.0.1:7860/',
 'https://31668.gradio.app')
```

```
interface = gr.Interface(fn = hello_wo
                         inputs = gr.i
                         outputs = "text")
```

inputs module
inspect
interface
interpretation
ip_address
Interface
get_input_instance
load_interface
get_output_instance
quantify_difference_in_label

2s completed at 4:47 PM

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[10]

view the api | built with

```
(<Flask 'gradio.networking'>,
 'http://127.0.0.1:7860/',
 'https://31668.gradio.app')
```

[11]
```
interface = gr.Interface(fn = hello_world,
                         inputs = gr.inputs.Textbox(lines = 5, placeholder="Enter your input here....."),
                         outputs = "text")
```

```
interface.launch()
```

```
<bound method Interface.launch of Gradio Interface for: hello_world
---------------------------------
inputs:
|-Textbox(label="None")
outputs:
|-Textbox(label="None")>
```

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Editing

```
[11] interface = gr.Interface(fn = hello_world,
                              inputs = gr.inputs.Textbox(lines = 5, placeholder="Enter your input here....."),
                              outputs = "text")
```

```
interface.launch()
```

```
Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
Running on public URL: https://22229.gradio.app

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```

Executing (3s) C... > laun... > url ... > hea... > reque... > reque... > sen... > sen... > urlop... > make requ... > getrespon... > beg... > read stat... > readin... > recv in... > rea...

00:03:24

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```
[11]  inputs = gr.inputs.Textbox(lines = 5, placeholder="Enter your input here....."),
      outputs = "text")
```

```
interface.launch()
```

```
Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
Running on public URL: https://22229.gradio.app

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```

NAME

Enter your input here.....

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https://1b9d.gradio.app)

```
interface = gr.Interface(fn = hello_world,
                         inputs = gr.inputs.Textbox(lines = 10, placeholder="Enter your input here....."),
                         outputs = "text")
```

```
interface.launch()
```

```
Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
Running on public URL: https://22229.gradio.app

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```

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```
!interface.launch()
```

```
Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
```

Executing (1s) Cell > launch() > setup_tunnel() > create_tunnel() > connect() > start_client() > wait() > wait()

00:03:35

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```
interface = gr.Interface(fn = hello_world,
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```

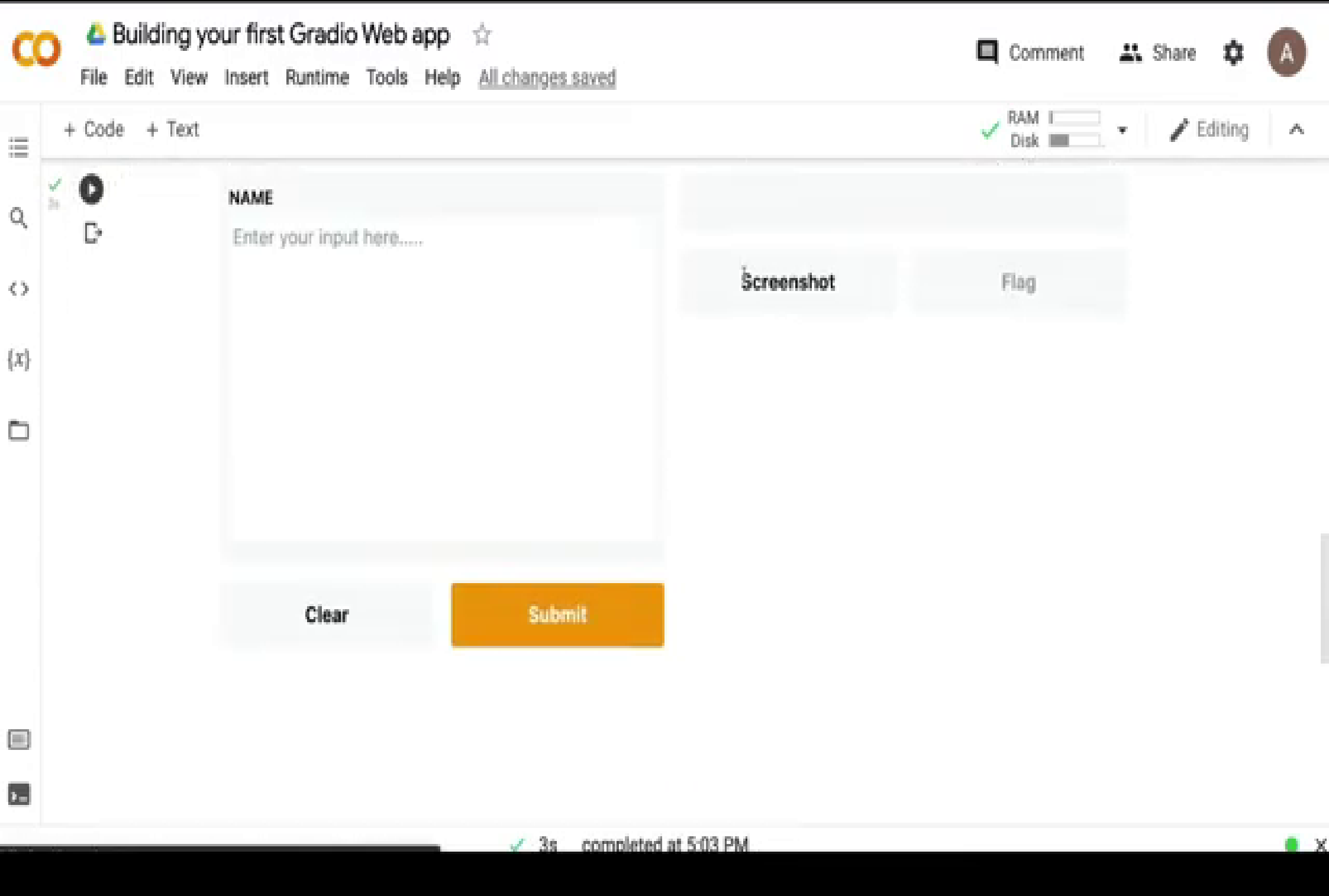
```
!interface.launch()
```

```
Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
Running on public URL: https://44140.gradio.app

This share link will expire in 72 hours. To get longer links, send an email to: support@gradio.app
```

Executing (2s) C... > laun... > url... > hea... > reque... > reque... > sen... > sen... > urlop... > make requ... > getresponse... > beg... > read stat... > readin... > recv in... > rea...

00:03:37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```
        'http://127.0.0.1:7860/',
        'https://31668.gradio.app')
```

```
interface = gr.Interface(fn = hello_world,
                         inputs = gr.inputs.Textbox(lines = 10, placeholder="Enter your input here....."),
                         outputs = "text")
```

```
[15] interface.launch()
```

```
Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
Running on public URL: https://44140.gradio.app

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```

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```
        'http://127.0.0.1:7860/',
        'https://31668.gradio.app')
```

```
[14] interface = gr.Interface(fn = hello_world,
                              inputs = gr.inputs.Textbox(lines = 10, placeholder="Enter your input here....."),
                              outputs = "text")
```

```
interface.launch()
```

```
Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
Running on public URL: https://44140.gradio.app

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```

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```
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Running on public URL: https://44140.gradio.app

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```

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```
        'http://127.0.0.1:7860/',
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Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
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```

NAME

Enter your input here.....

Screenshot Flag

3s completed at 5:03 PM

comparison.

Working with Images

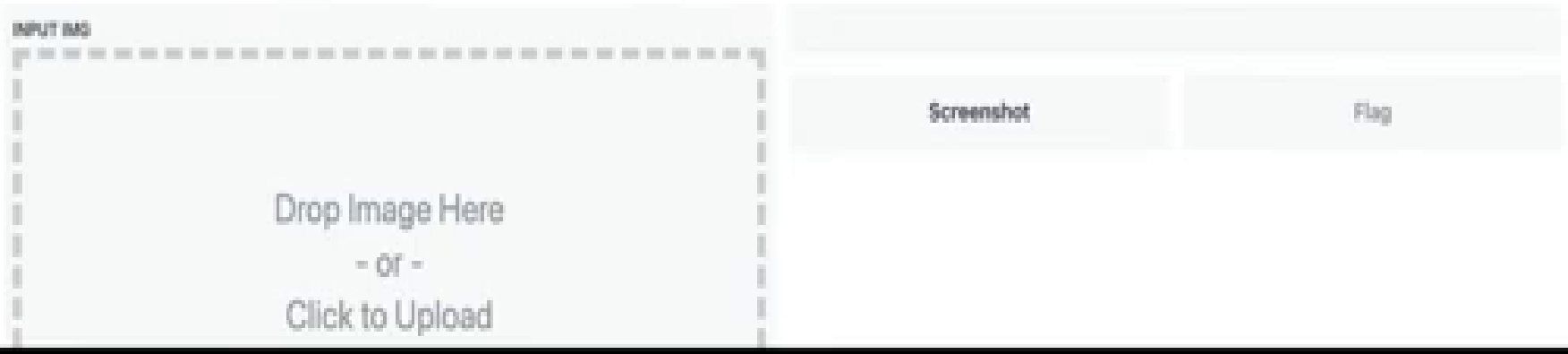
Let's try an image to image function. When using the `Image` component, your function will receive a numpy array of your specified size, with the shape `(width, height, 3)`, where the last dimension represents the RGB values. We'll return an image as well in the form of a numpy array.

```
import gradio as gr
import numpy as np

def sepia(input_img):
  sepia_filter = np.array([[.393, .769, .189],
                           [.349, .686, .168],
                           [.272, .534, .131]])
  sepia_img = input_img.dot(sepia_filter.T)
  sepia_img /= sepia_img.max()
  return sepia_img

iface = gr.Interface(sepia, gr.inputs.Image(shape=(200, 200)), "image")

iface.launch()
```



00:04:42

Building your first Gradio Web app

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Comment Share A

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RAM Disk Editing

[15]

view the api | built with

```
(<Flask 'gradio.networking'>,
 'http://127.0.0.1:7862/',
 'https://44140.gradio.app')
```

3s completed at 5:03 PM

00:05:02

Building your first Gradio Web app

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Comment Share

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RAM Disk Editing

[15]

view the api | built with

```
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3s completed at 5:03 PM

00:05:03

Building your first Gradio Web app

File Edit View Insert Runtime Tools Help All changes saved

Comment Share

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RAM Disk Editing

[15]

view the api | built with

```
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 'https://44140.gradio.app')
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iface = gr.Interface(sepia, gr.inputs.Image(shape=(200, 200)), "image")

iface.launch()
```

3s completed at 5:03 PM

00:05:10

Building your first Gradio Web app

File Edit View Insert Runtime Tools Help All changes saved

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RAM Disk Editing

[10]
```
(<Flask 'gradio.networking'>,
 'http://127.0.0.1:7860/',
 'https://31668.gradio.app')
```

```
interface = gr.Interface(fn = hello_world,
                         inputs = gr.inputs.Textbox(lines = 10, placeholder="Enter your input here....."),
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```

[15]
```
interface.launch()
```

```
Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
Running on public URL: https://44140.gradio.app

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```

NAME

Enter your input here.....

Screenshot Flag

3s completed at 5:03 PM

00:05:19

Building your first Gradio Web app

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RAM Disk Editing

'https://44140.gradio.app')

```
import gradio as gr
import numpy as np

def sepia(input_img):
  sepia_filter = np.array([[.393, .769, .189],
                           [.349, .686, .168],
                           [.272, .534, .131]])
  sepia_img = input_img.dot(sepia_filter.T)
  sepia_img /= sepia_img.max()
  return sepia_img

iface = gr.Interface(sepia, gr.inputs.Image(shape=(200, 200)), "image")

iface.launch()
```

3s completed at 5:03 PM

00:05:40

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RAM Disk Editing

[16]
```
Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
Running on public URL: https://15052.gradio.app

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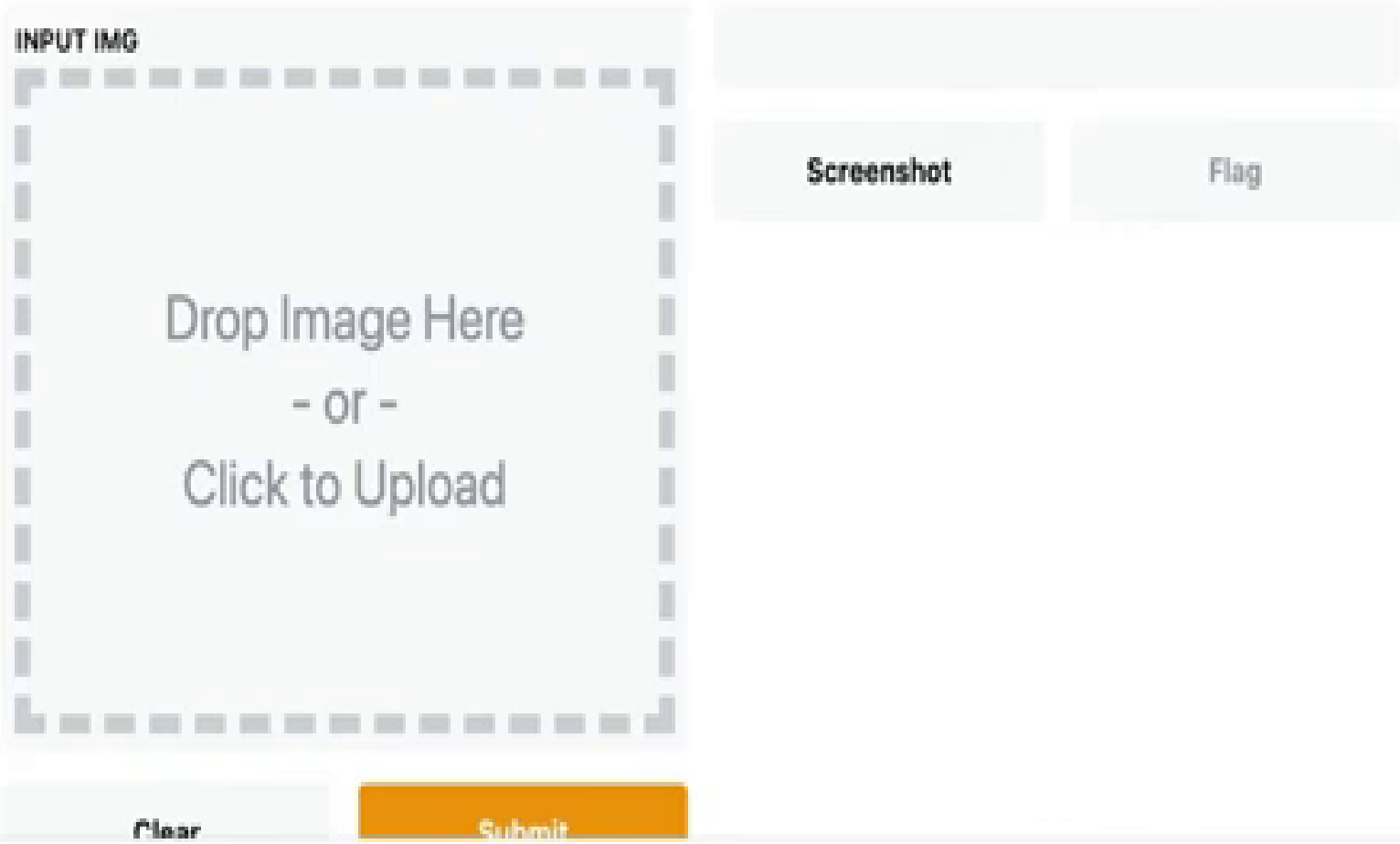
```



3s completed at 5:05 PM

00:05:49

Building your first Gradio Web app

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Comment Share A

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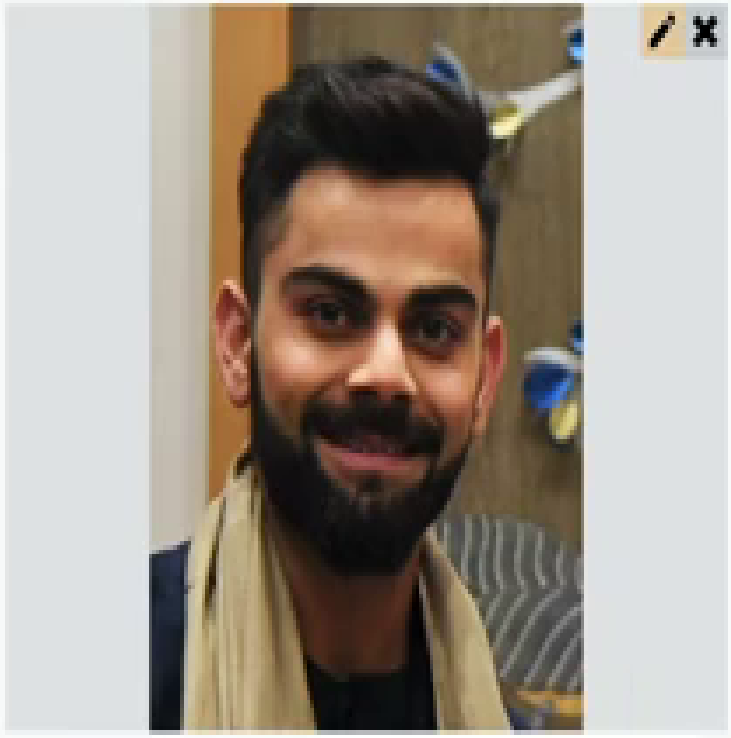
RAM Disk Editing

INPUT IMG



2.0s

Screenshot Flag

Clear Submit

3s completed at 5:05 PM

00:05:52

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Comment Share

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RAM Disk

Editing

```
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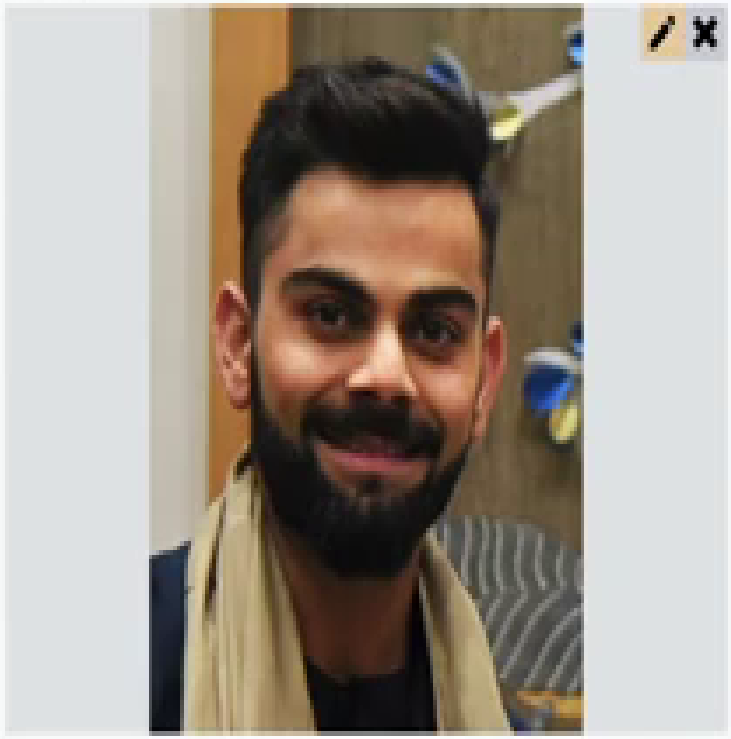
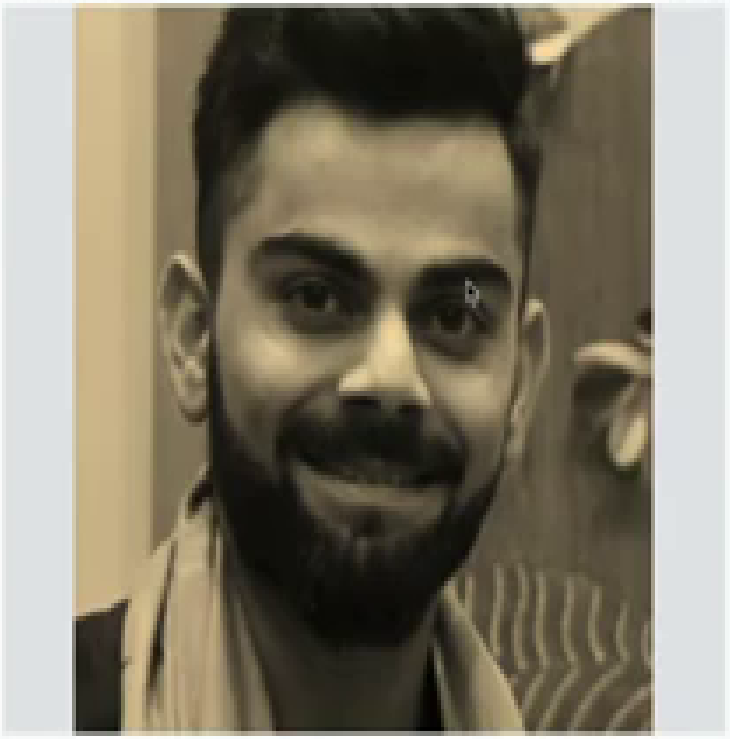
```

INPUT IMG



OUTPUT 0.01s



Clear Submit Screenshot Flag

3s completed at 5:05 PM

00:06:07

Building your first Gradio Web app

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RAM Disk Editing

```
import gradio as gr
import numpy as np

def sepia(input_img):
  sepia_filter = np.array([[.393, .769, .189],
                           [.349, .686, .168],
                           [.272, .534, .131]])
  sepia_img = input_img.dot(sepia_filter.T)
  sepia_img /= sepia_img.max()
  return sepia_img

iface = gr.Interface(sepia, gr.inputs.Image(shape=(200, 200)), "image")

iface.launch()
```

```
Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
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```

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00:06:26

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RAM Disk Editing

```
import gradio as gr
import numpy as np

def sepia(input_img):
  sepia_filter = np.array([[.393, .769, .189],
                           [.349, .686, .168],
                           [.272, .534, .131]])
  sepia_img = input_img.dot(sepia_filter.T)
  sepia_img /= sepia_img.max()
  return sepia_img

iface = gr.Interface(sepia, gr.inputs.Image(shape=(200, 200)), "image")

iface.launch()
```

```
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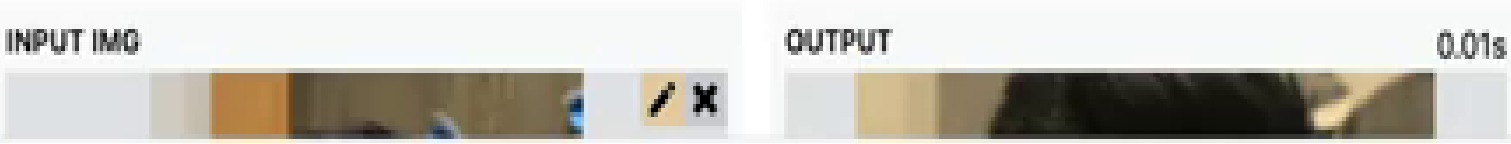
Running on public URL: https://15052.gradio.app

This share link will expire in 72 hours. To get longer links, send an email to: support@gradio.app
```



3s completed at 5:05 PM

00:06:30

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RAM Disk Editing

[15]

view the api | built with

```
(<Flask 'gradio.networking'>,
 'http://127.0.0.1:7862/',
 'https://44140.gradio.app')
```

```
import gradio as gr
import numpy as np

def sepia(input_img):
  sepia_filter = np.array([[.393, .769, .189],
                           [.349, .686, .168],
                           [.272, .534, .131]])
  sepia_img = input_img.dot(sepia_filter.T)
  sepia_img /= sepia_img.max()
  return sepia_img

iface = gr.Interface(sepia, gr.inputs.Image(shape=(200, 200)), "image")

iface.launch()
```

```
Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
```

3s completed at 5:05 PM

00:06:39

Building your first Gradio Web app

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Comment Share

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RAM Disk Editing

```
[15] (<Flask 'gradio.networking'>,
      'http://127.0.0.1:7862/',
      'https://44140.gradio.app')
```

```
import gradio as gr
import numpy as np

def sepia(input_img):
  sepia_filter = np.array([[.393, .769, .189],
                           [.349, .686, .168],
                           [.272, .534, .131]])
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  sepia_img /= sepia_img.max()
  return sepia_img

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iface.launch()
```

```
Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
Running on public URL: https://15052.gradio.app

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```

3s completed at 5:05 PM

00:07:01

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RAM Disk Editing

view the api | built with

```
(<Flask 'gradio.networking'>,
 'http://127.0.0.1:7863/',
 'https://15052.gradio.app')
```

3s completed at 5:05 PM

Building your first Gradio Web app

File Edit View Insert Runtime Tools Help All changes saved

Comment Share A

+ Code + Text

RAM Disk Editing

```
(<Flask 'gradio.networking'>,
 'http://127.0.0.1:7863/',
 'https://15052.gradio.app')
```

[ ]

3s completed at 5:05 PM

Working with Data

You can use Gradio to support inputs and outputs from your typical data libraries, such as numpy arrays, pandas dataframes, and plotly graphs. Take a look at the demo below (ignore the complicated data manipulation in the function!)

```
import gradio as gr
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt

def sales_projections(employee_data):
    sales_data = employee_data.iloc[:, 1:4].astype("int").to_numpy()
    regression_values = np.apply_along_axis(lambda row:
        np.array(np.polyld(np.polyfit([0,1,2], row, 2))), 0, sales_data)
    projected_months = np.repeat(np.expand_dims(
        np.arange(3,12), 0), len(sales_data), axis=0)
    projected_values = np.array([
        month * month * regression[0] + month * regression[1] + regression[2]
        for month, regression in zip(projected_months, regression_values)])
    plt.plot(projected_values.T)
    plt.legend(employee_data["Name"])
    return employee_data, plt.gcf(), regression_values

iface = gr.Interface(sales_projections,
    gr.inputs.Dataframe(
        headers=["Name", "Jan Sales", "Feb Sales", "Mar Sales"],
        default=[["Jon", 12, 14, 18], ["Alice", 14, 17, 2], ["Sana", 8, 9.5, 12]]
    ),
    [
        "dataframe",
        "plot",
        "numpy"
    ],
```

00:07:09

```
    regression_values = np.apply_along_axis(lambda row:
        np.array(np.poly1d(np.polyfit([0,1,2], row, 2))), 0, sales_data)
    projected_months = np.repeat(np.expand_dims(
        np.arange(3,12), 0), len(sales_data), axis=0)
    projected_values = np.array([
        month * month * regression[0] + month * regression[1] + regression[2]
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    gr.inputs.Dataframe(
        headers=["Name", "Jan Sales", "Feb Sales", "Mar Sales"],
        default=[["Jon", 12, 14, 18], ["Alice", 14, 17, 2], ["Sana", 8, 9.5, 12]]
    ),
    [
        "dataframe",
        "plot",
        "numpy"
    ],
    description="Enter sales figures for employees to predict sales trajectory over year."
)
iface.launch()
```

Enter sales figures for employees to predict sales trajectory over year.

EMPLOYEE DATA

	Name	Jan Sales	Feb Sales	Mar Sales
1	Jon	12	14	18

Screenshot

Flag

00:07:10

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RAM Disk

Editing

```
[16] ('http://127.0.0.1:7863/',
      'https://15052.gradio.app')
```

3s completed at 5:05 PM

00:07:13

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RAM Disk Editing

[16]

```
(<Flask 'gradio.networking'>,
 'http://127.0.0.1:7863/',
 'https://15052.gradio.app')
```

```
import gradio as gr
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt

def sales_projections(employee_data):
    sales_data = employee_data.iloc[:, 1:4].astype("int").to_numpy()
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    projected_values = np.array([
        month * month * regression[0] + month * regression[1] + regression[2]
        for month, regression in zip(projected_months, regression_values)])
    plt.plot(projected_values.T)
    plt.legend(employee_data["Name"])
    return employee_data, plt.gcf(), regression_values
```

3s completed at 5:05 PM

00:07:21

Building your first Gradio Web app

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RAM Disk Editing

```
import gradio as gr
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt

def sales_projections(employee_data):
    sales_data = employee_data.iloc[:, 1:4].astype("int").to_numpy()
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        for month, regression in zip(projected_months, regression_values)])
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    plt.legend(employee_data["Name"])
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    gr.inputs.Dataframe(
        headers=["Name", "Jan Sales", "Feb Sales", "Mar Sales"],
        default=[["Jon", 12, 14, 18], ["Alice", 14, 17, 2], ["Sana", 8, 9.5, 12]]
```

3s completed at 5:05 PM

00:07:30

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RAM Disk

Editing

```
        np.array(np.polyld(np.polyfit([0,1,2], row, 2))), 0, sales_data)
    projected_months = np.repeat(np.expand_dims(
        np.arange(3,12), 0), len(sales_data), axis=0)
    projected_values = np.array([
        month * month * regression[0] + month * regression[1] + regression[2]
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    gr.inputs.Dataframe(
        headers=["Name", "Jan Sales", "Feb Sales", "Mar Sales"],
        default=[["Jon", 12, 14, 18], ["Alice", 14, 17, 2], ["Sana", 8, 9.5, 12]]
    ),
    [
        "dataframe",
        "plot",
        "numpy"
    ],
    description="Enter sales figures for employees to predict sales trajectory over year."
)
iface.launch()
```

3s completed at 5:05 PM

00:07:32

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RAM Disk Editing

```
    regression_values = np.apply_along_axis(lambda row:
        np.array(np.polyld(np.polyfit([0,1,2], row, 2))), 0, sales_data)
    projected_months = np.repeat(np.expand_dims(
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    plt.legend(employee_data["Name"])
    return employee_data, plt.gcf(), regression_values

iface = gr.Interface(sales_projections,
    gr.inputs.Dataframe(
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        default=[["Jon", 12, 14, 18], ["Alice", 14, 17, 2], ["Sana", 8, 9.5, 12]]
    ),
    [
        "dataframe",
        "plot",
        "numpy"
    ],
    description="Enter sales figures for employees to predict sales trajectory over year."
)
```

3s completed at 5:05 PM

00:07:35

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RAM Disk Editing

```
def sales_projections(employee_data):
    sales_data = employee_data.iloc[:, 1:4].astype("int").to_numpy()
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        np.array(np.polyld(np.polyfit([0,1,2], row, 2))), 0, sales_data)
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        np.arange(3,12), 0), len(sales_data), axis=0)
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    gr.inputs.Dataframe(
        headers=["Name", "Jan Sales", "Feb Sales", "Mar Sales"],
        default=[["Jon", 12, 14, 18], ["Alice", 14, 17, 2], ["Sana", 8, 9.5, 12]]
    ),
    [
        "dataframe",
        "plot",
        "numpy"
    ],
```

3s completed at 5:05 PM

00:07:43

Building your first Gradio Web app

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RAM Disk Editing

```
def sales_projections(employee_data):
    sales_data = employee_data.iloc[:, 1:4].astype("int").to_numpy()
    regression_values = np.apply_along_axis(lambda row:
        np.array(np.poly1d(np.polyfit([0,1,2], row, 2))), 0, sales_data)
    projected_months = np.repeat(np.expand_dims(
        np.arange(3,12), 0), len(sales_data), axis=0)
    projected_values = np.array([
        month * month * regression[0] + month * regression[1] + regression[2]
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    ),
    [
        "dataframe",
        "plot",
        "numpy"
```

3s completed at 5:05 PM

00:07:45

Building your first Gradio Web app

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RAM Disk Editing

```
        np.array(np.polyld(np.polyfit([0,1,2], row, 2))), 0, sales_data)
    projected_months = np.repeat(np.expand_dims(
        np.arange(3,12), 0), len(sales_data), axis=0)
    projected_values = np.array([
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iface = gr.Interface(sales_projections,
    gr.inputs.Dataframe(
        headers=["Name", "Jan Sales", "Feb Sales", "Mar Sales"],
        default=[["Jon", 12, 14, 18], ["Alice", 14, 17, 2], ["Sana", 8, 9.5, 12]]
    ),
    [
        "dataframe",
        "plot",
        "numpy"
    ],
    description="Enter sales figures for employees to predict sales trajectory over year."
)
iface.launch()
```

3s completed at 5:05 PM

00:07:59

Building your first Gradio Web app

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RAM Disk Editing

```
        np.arange(3,12), 0), len(sales_data), axis=0)
    projected_values = np.array([
        month * month * regression[0] + month * regression[1] + regression[2]
        for month, regression in zip(projected_months, regression_values)])
    plt.plot(projected_values.T)
    plt.legend(employee_data["Name"])
    return employee_data, plt.gcf(), regression_values

iface = gr.Interface(sales_projections,
    gr.inputs.Dataframe(
        headers=["Name", "Jan Sales", "Feb Sales", "Mar Sales"],
        default=[["Jon", 12, 14, 18], ["Alice", 14, 17, 2], ["Sana", 8, 9.5, 12]]
    ),
    [
        "dataframe",
        "plot",
        "numpy"
    ],
    description="Enter sales figures for employees to predict sales trajectory over year."
)
iface.launch()
```

3s completed at 5:05 PM

00:08:03

Building your first Gradio Web app

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RAM Disk Editing

```
    projected_months = np.repeat(np.expand_dims(
        np.arange(3,12), 0), len(sales_data), axis=0)
    projected_values = np.array([
        month * month * regression[0] + month * regression[1] + regression[2]
        for month, regression in zip(projected_months, regression_values)])
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        default=[["Jon", 12, 14, 18], ["Alice", 14, 17, 2], ["Sana", 8, 9.5, 12]]
    ),
    [
        "dataframe",
        "plot",
        "numpy"
    ],
    description="Enter sales figures for employees to predict sales trajectory over year."
)
iface.launch()
```

3s completed at 5:05 PM

00:08:05

Building your first Gradio Web app

File Edit View Insert Runtime Tools Help

Comment Share

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RAM Disk

Editing

```
        [
            "dataframe",
            "plot",
            "numpy"
        ],
        description="Enter sales figures for employees to predict sales trajectory over year."
    )
iface.launch()
```

```
Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
```

Executing (2s) Cell > launch() > setup_tunnel() > create_tunnel() > connect() > start_client() > wait() > wait()

00:08:08

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```
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```

3s completed at 5:09 PM

00:08:14

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Comment Share

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RAM Disk Editing

```
    description="Enter sales figures for employees to predict sales trajectory over year."
)
iface.launch()
```

```
Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
Running on public URL: https://31333.gradio.app

This share link will expire in 72 hours. To get longer links, send an email to: support@gradio.app
```

Enter sales figures for employees to predict sales trajectory over year.

EMPLOYEE DATA

	Name	Jan Sal	Feb Sa	Mar Sa
1	Jon	12	14	18
2	Alice	14	17	2
3	Sana	8	9.5	12

Clear Submit

OUTPUT 1 0.04s

3s completed at 5:09 PM

00:08:17

Building your first Gradio Web app

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Comment Share

+ Code + Text

RAM Disk Editing

```
    description="Enter sales figures for employees to predict sales trajectory over year."
)
iface.launch()
```

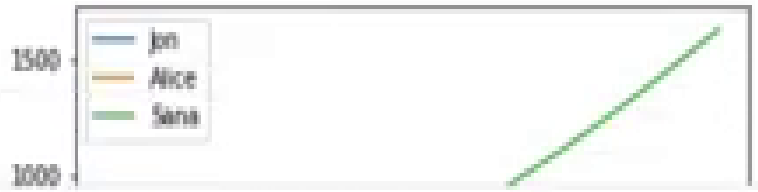
```
Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
Running on public URL: https://31333.gradio.app

This share link will expire in 72 hours. To get longer links, send an email to: support@gradio.app
```

OUTPUT 1 0.04s

Name	Jan Sales	Feb Sales	Mar Sales
Jon	12	14	18
Alice	14	17	2
Sana	8	9.5	12

OUTPUT 2



3s completed at 5:09 PM

00:08:26

Building your first Gradio Web app

File Edit View Insert Runtime Tools Help Saving...

Comment Share

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RAM Disk Editing

```
    sales_data = employee_data.iloc[:, 1:4].astype("int").to_numpy()
    regression_values = np.apply_along_axis(lambda row:
        np.array(np.polyld(np.polyfit([0,1,2], row, 2))), 0, sales_data)
    projected_months = np.repeat(np.expand_dims(
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    plt.legend(employee_data["Name"])
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iface = gr.Interface(sales_projections,
    gr.inputs.Dataframe(
        headers=["Name", "Jan Sales", "Feb Sales", "Mar Sales"],
        default=[["Jon", 12, 14, 18], ["Alice", 14, 17, 2], ["Sana", 8, 9.5, 12]]
    ),
    [
        "dataframe",
        "plot",
        "numpy"
    ],
    description="Enter sales figures for employees to predict sales trajectory over year."
```

3s completed at 5:09 PM

00:08:29

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```
)
iface.launch()
```

```
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```

Clear

Submit

OUTPUT 1

0.04s

Name	Jan Sales	Feb Sales	Mar Sales
Jon	12	14	18
Alice	14	17	2
Sana	8	9.5	12

OUTPUT 2

3s completed at 5:09 PM

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RAM Disk Editing

```
)
iface.launch()
```

```
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Running on public URL: https://31333.gradio.app

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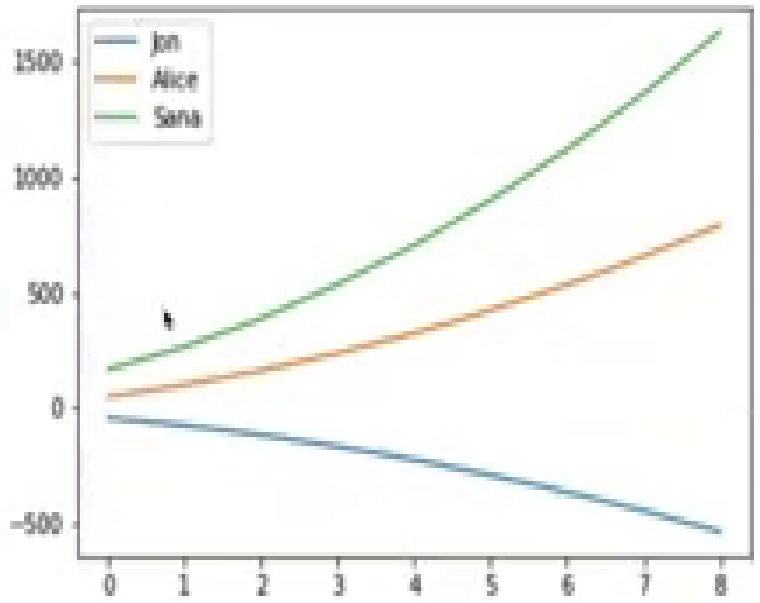
```



OUTPUT 3

3s completed at 5:09 PM

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RAM Disk Editing

```
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```

Enter sales figures for employees to predict sales trajectory over year.

EMPLOYEE DATA

	Name	Jan Sal	Feb Sa	Mar Sa
1	Jon	12	14	18
2	Alice	14	17	2
3	Sana	8	9.5	12

Clear Submit

OUTPUT 1 0.04s

Name	Jan Sales	Feb Sales	Mar Sales
Jon	12	14	18
Alice	14	17	2
Sana	8	9.5	12

OUTPUT 2

3s completed at 5:09 PM

00:08:37

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RAM Disk Editing

```
def sales_projections(employee_data):
    sales_data = employee_data.iloc[:, 1:4].astype("int").to_numpy()
    regression_values = np.apply_along_axis(lambda row:
        np.array(np.poly1d(np.polyfit([0,1,2], row, 2))), 0, sales_data)
    projected_months = np.repeat(np.expand_dims(
        np.arange(3,12), 0), len(sales_data), axis=0)
    projected_values = np.array([
        month * month * regression[0] + month * regression[1] + regression[2]
        for month, regression in zip(projected_months, regression_values)])
    plt.plot(projected_values.T)
    plt.legend(employee_data["Name"])
    return employee_data, plt.gcf(), regression_values

iface = gr.Interface(sales_projections,
    gr.inputs.Dataframe(
        headers=["Name", "Jan Sales", "Feb Sales", "Mar Sales"],
        default=[["Jon", 12, 100, 18], ["Alice", 14, 17, 2], ["Sana", 8, 9.5, 12]]
    ),
    [
        "dataframe",
        "plot",
        "numpy"
    ]
```

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RAM Disk

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```
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RAM Disk Editing

```
iface = gr.Interface(sales_projections,
    gr.inputs.Dataframe(
        headers=["Name", "Jan Sales", "Feb Sales", "Mar Sales"],
        default=[["Jon", 12, 100, 18], ["Alice", 14, 17, 2], ["Sana", 8, 9.5, 12]]
    ),
    [
        "dataframe",
        "plot",
        "numpy"
    ],
    description="Enter sales figures for employees to predict sales trajectory over year."
)
iface.launch()
```

```
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```

Enter sales figures for employees to predict sales trajectory over year.

EMPLOYEE DATA

	Name	Jan Sal	Feb Sa	Mar Sa

3s completed at 5:09 PM

00:08:47

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File Edit View Insert Runtime Tools Help

Comment Share

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RAM Disk Editing

```
        "numpy"
    ],
    description="Enter sales figures for employees to predict sales trajectory over year."
)
iface.launch()
```

```
Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
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```

Enter sales figures for employees to predict sales trajectory over year.

EMPLOYEE DATA

	Name	Jan Sal	Feb Sa	Mar Sa
1	Jon	12	100	18
2	Alice	14	17	2
3	Sana	8	9.5	12

Screenshot Flag

Clear Submit

3s completed at 5:09 PM

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RAM Disk Editing

```
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```

Enter sales figures for employees to predict sales trajectory over year.

EMPLOYEE DATA

	Name	Jan Sal	Feb Sa	Mar Sa
1	Jon	12	100	18
2	Alice	14	17	2
3	Sana	8	9.5	12

Clear Submit

OUTPUT 1 0.02s

Name	Jan Sales	Feb Sales	Mar Sales
Jon	12	100	18

3s completed at 5:09 PM

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File Edit View Insert Runtime Tools Help

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RAM Disk Editing

```
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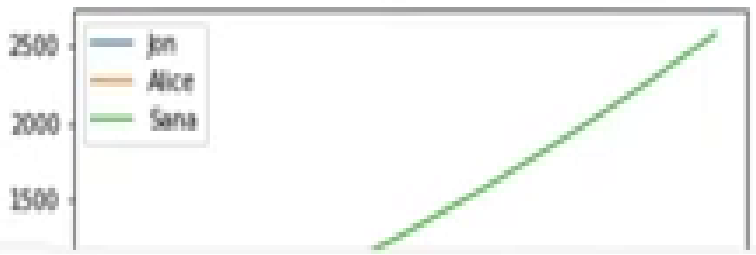
```

Clear Submit

OUTPUT 1 0.02s

Name	Jan Sales	Feb Sales	Mar Sales
Jon	12	100	18
Alice	14	17	2
Sana	8	9.5	12

OUTPUT 2



3s completed at 5:09 PM

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Comment Share

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RAM Disk

Editing

```
    regression_values = np.apply_along_axis(lambda row:
        np.array(np.poly1d(np.polyfit([0,1,2], row, 2))), 0, sales_data)
    projected_months = np.repeat(np.expand_dims(
        np.arange(3,12), 0), len(sales_data), axis=0)
    projected_values = np.array([
        month * month * regression[0] + month * regression[1] + regression[2]
        for month, regression in zip(projected_months, regression_values)])
    plt.plot(projected_values.T)
    plt.legend(employee_data["Name"])
    return plt.gcf()

iface = gr.Interface(sales_projections,
    gr.inputs.Dataframe(
        headers=["Name", "Jan Sales", "Feb Sales", "Mar Sales"],
        default=[["Jon", 12, 100, 18], ["Alice", 14, 17, 2], ["Sana", 8, 9.5, 12]]
    ),
    [
        "dataframe",
        "plot",
        "numpy"
    ],
    description="Enter sales figures for employees to predict sales trajectory over year."
)
```

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RAM Disk Editing

```
        for month, regression in zip(projected_months, regression_values)])
    plt.plot(projected_values.T)
    plt.legend(employee_data["Name"])
    return plt.gcf()

iface = gr.Interface(sales_projections,
    gr.inputs.Dataframe(
        headers=["Name", "Jan Sales", "Feb Sales", "Mar Sales"],
        default=[["Jon", 12, 100, 18], ["Alice", 14, 17, 2], ["Sana", 8, 9.5, 12]]
    ),
    [

        "plot",
        "numpy"
    ],
    description="Enter sales figures for employees to predict sales trajectory over year."
)
iface.launch()
```

```
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```

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```
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RAM Disk Editing

Enter sales figures for employees to predict sales trajectory over year.

EMPLOYEE DATA

	Name	Jan Sal	Feb Sa	Mar Sa
1	Jon	12	100	18
2	Alice	14	17	2
3	Sana	8	9.5	12

Screenshot

Flag

Clear

Submit

3s completed at 5:10 PM

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RAM Disk Editing

```
            "plot"
        ],
        description="Enter sales figures for employees to predict sales trajectory over year."
    )
    iface.launch()
```

```
Colab notebook detected. To show errors in colab notebook, set `debug=True` in `launch()`
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```

Enter sales figures for employees to predict sales trajectory over year.

EMPLOYEE DATA

	Name	Jan Sal	Feb Sa	Mar Sa
1	Jon	12	100	18
2	Alice	14	17	2
3	Sana	8	9.5	12

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Screenshot Flag

Clear Submit

3s completed at 5:10 PM

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RAM Disk Editing

```
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```

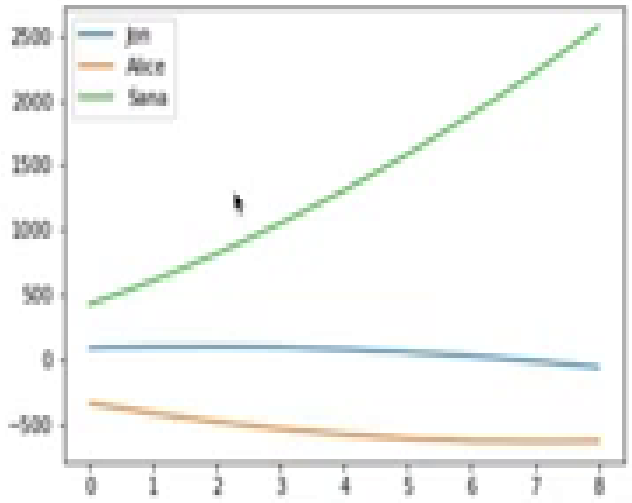
Enter sales figures for employees to predict sales trajectory over year.

EMPLOYEE DATA

	Name	Jan Sal	Feb Sa	Mar Sa
1	Jon	12	100	18
2	Alice	14	17	2
3	Sana	8	9.5	12

Clear Submit

OUTPUT 0.02s



3s completed at 5:10 PM

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Comment Share

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RAM Disk

Editing

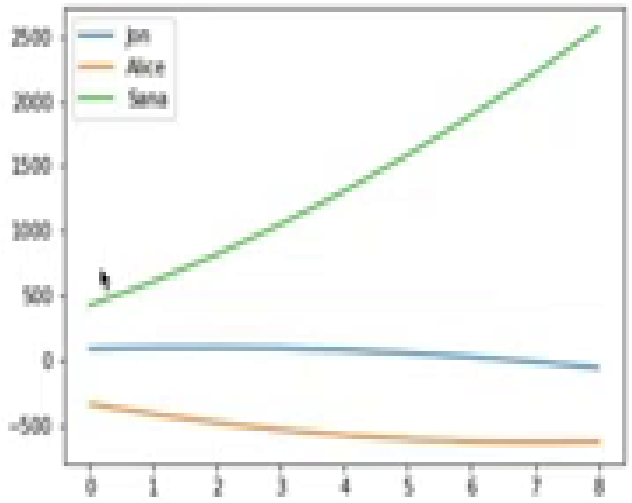
Enter sales figures for employees to predict sales trajectory over year.

EMPLOYEE DATA

	Name	Jan Sal	Feb Sa	Mar Sa
1	Jon	12	100	18
2	Alice	14	17	2
3	Sana	8	9.5	12

Clear Submit

OUTPUT 0.02s



Screenshot Flag

3s completed at 5:10 PM

00:09:58

Building your first Gradio Web app

File Edit View Insert Runtime Tools Help All changes saved

Comment Share

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RAM Disk Editing

```
            np.arange(3,12), 0), len(sales_data), axis=0)
        projected_values = np.array([
            month * month * regression[0] + month * regression[1] + regression[2]
            for month, regression in zip(projected_months, regression_values)])
        plt.plot(projected_values.T)
        plt.legend(employee_data["Name"])
        return plt.gcf()

    iface = gr.Interface(sales_projections,
        gr.inputs.Dataframe(
            headers=["Name", "Jan Sales", "Feb Sales", "Mar Sales"],
            default=[["Jon", 12, 100, 18], ["Alice", 14, 17, 2], ["Sana", 8, 9.5, 12]]
        ),
        [

            "plot"
        ],
        description="Enter sales figures for employees to predict sales trajectory over year."
    )
    iface.launch()
```

```
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```

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RAM Disk Editing

```
        month * month * regression[0] + month * regression[1] + regression[2]
        for month, regression in zip(projected_months, regression_values)])
    plt.plot(projected_values.T)
    plt.legend(employee_data["Name"])
    return plt.gcf()

iface = gr.Interface(sales_projections,
    gr.inputs.Dataframe(
        headers=["Name", "Jan Sales", "Feb Sales", "Mar Sales"],
        default=[["Jon", 12, 100, 18], ["Alice", 14, 17, 2], ["Sana", 8, 9.5, 12]]
    ),
    [

        "plot"
    ],
    description="Enter sales figures for employees to predict sales trajectory over year."
)
iface.launch()
```

```
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RAM Disk Editing

```
    regression_values = np.apply_along_axis(lambda row:
        np.array(np.polyld(np.polyfit([0,1,2], row, 2))), 0, sales_data)
    projected_months = np.repeat(np.expand_dims(
        np.arange(3,12), 0), len(sales_data), axis=0)
    projected_values = np.array([
        month * month * regression[0] + month * regression[1] + regression[2]
        for month, regression in zip(projected_months, regression_values)])
    plt.plot(projected_values.T)
    plt.legend(employee_data["Name"])
    return plt.gcf()

iface = gr.Interface(sales_projections,
    gr.inputs.Dataframe(
        headers=["Name", "Jan Sales", "Feb Sales", "Mar Sales"],
        default=[["Jon", 12, 100, 18], ["Alice", 14, 17, 2], ["Sana", 8, 9.5, 12]]
    ),
    [

        "plot"
    ],
    description="Enter sales figures for employees to predict sales trajectory over year."
)
iface.launch()
```

3s completed at 5:10 PM