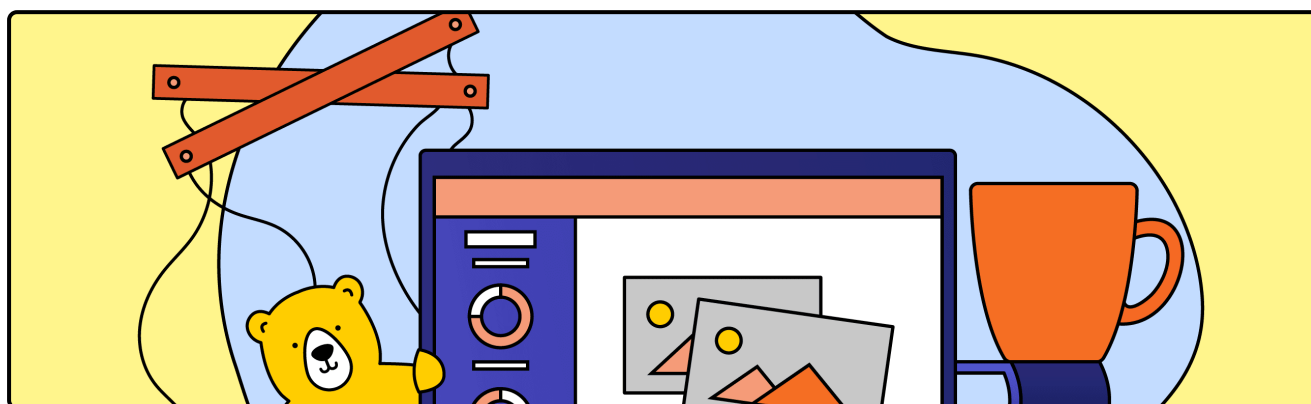


How to Download Images from a Website Using Puppeteer

This article will take you through steps to download images from a website using Puppeteer.

by Josephine Loo · June 2022 · **Updated May 2024**



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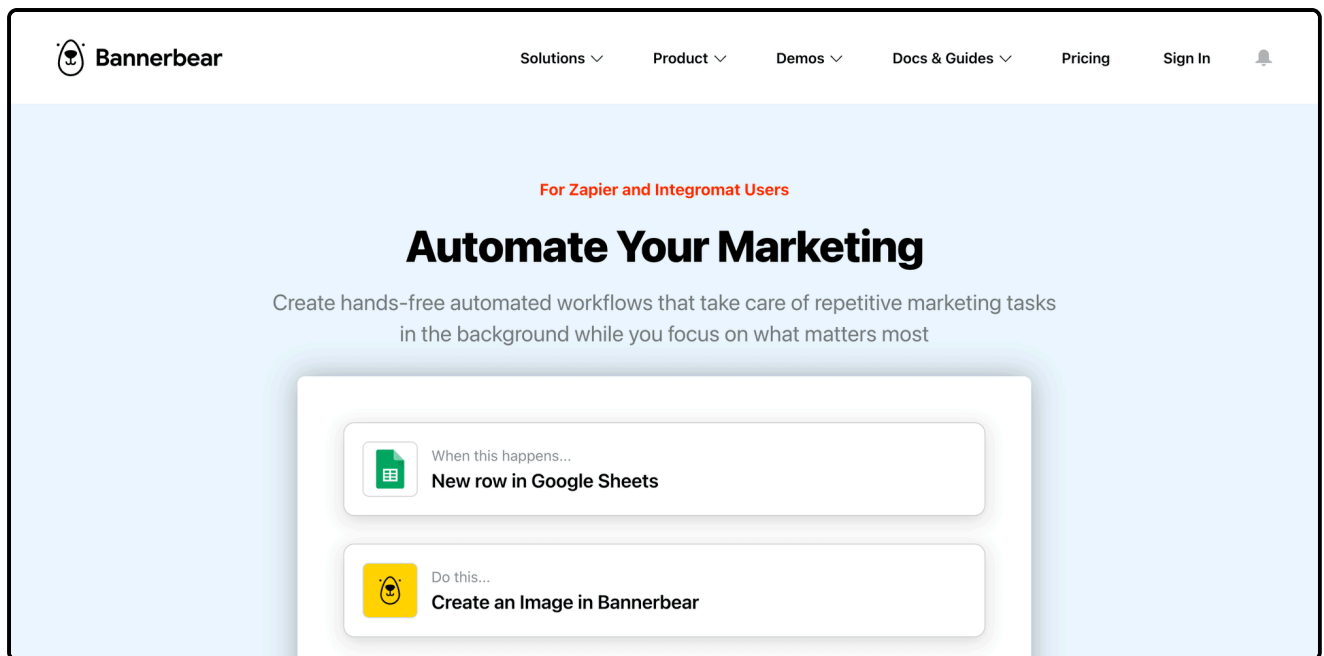
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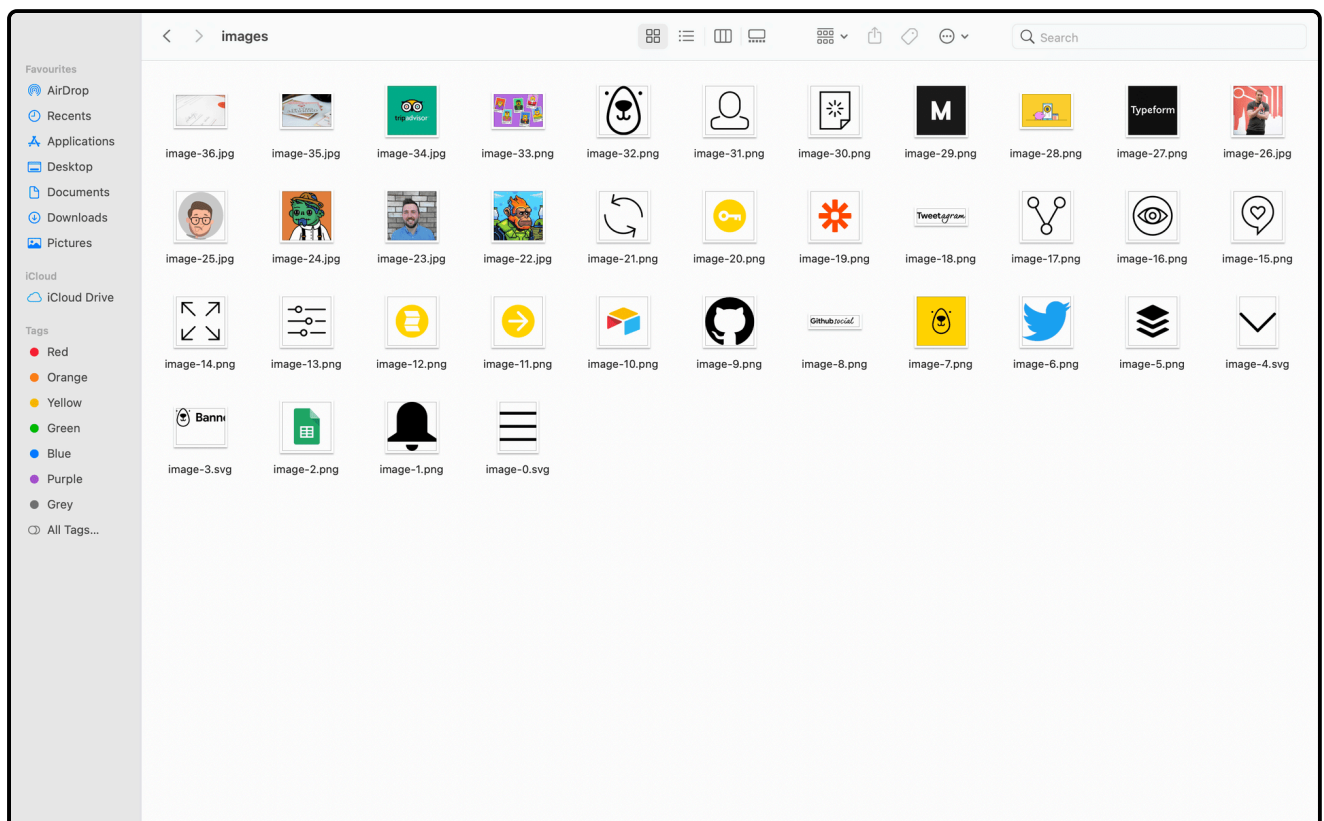
Why use Puppeteer to download images? We can just right-click and save. It's simple.

That's only true if you're only downloading a few images. Imagine if you're downloading 100+ images from a website manually, that's a dreadful task. 😨 Fret not! We can do this by using automation and save all images from a website to a folder IN ONE GO.

In this tutorial, we will be guiding you step-by-step on how to download images (.jpg, .png, .svg, .gif) from a website using an automation tool called Puppeteer. You can use it on any website that you want but we will be using this Bannerbear [page](#) for this tutorial:




At the end of this tutorial, you will have images from a website downloaded to a folder:






Images downloaded from the Bannerbear page using Puppeteer

What is Puppeteer

[Puppeteer](#)  is a Node library which provides a high-level API to control Chrome or Chromium over the DevTools Protocol. It is very useful for automating the Chrome browser to run website tests. Puppeteer runs headless by default, which means you won't see the browser running but it can be configured to run full (non-headless) Chrome or Chromium.

Pre-requisites

To use Puppeteer to download images from a website, you will need to have [Node.js](#)  and [npm](#)  installed.

For reference, the version of Node.js and npm we are using for this tutorial are 14.17.3 and 6.14.13 respectively. Please check the [official documentation](#)  to check your version compatibility.

Getting Started

Step 1. Create a New Node.js Project

Create a new folder for your project and go to the directory.

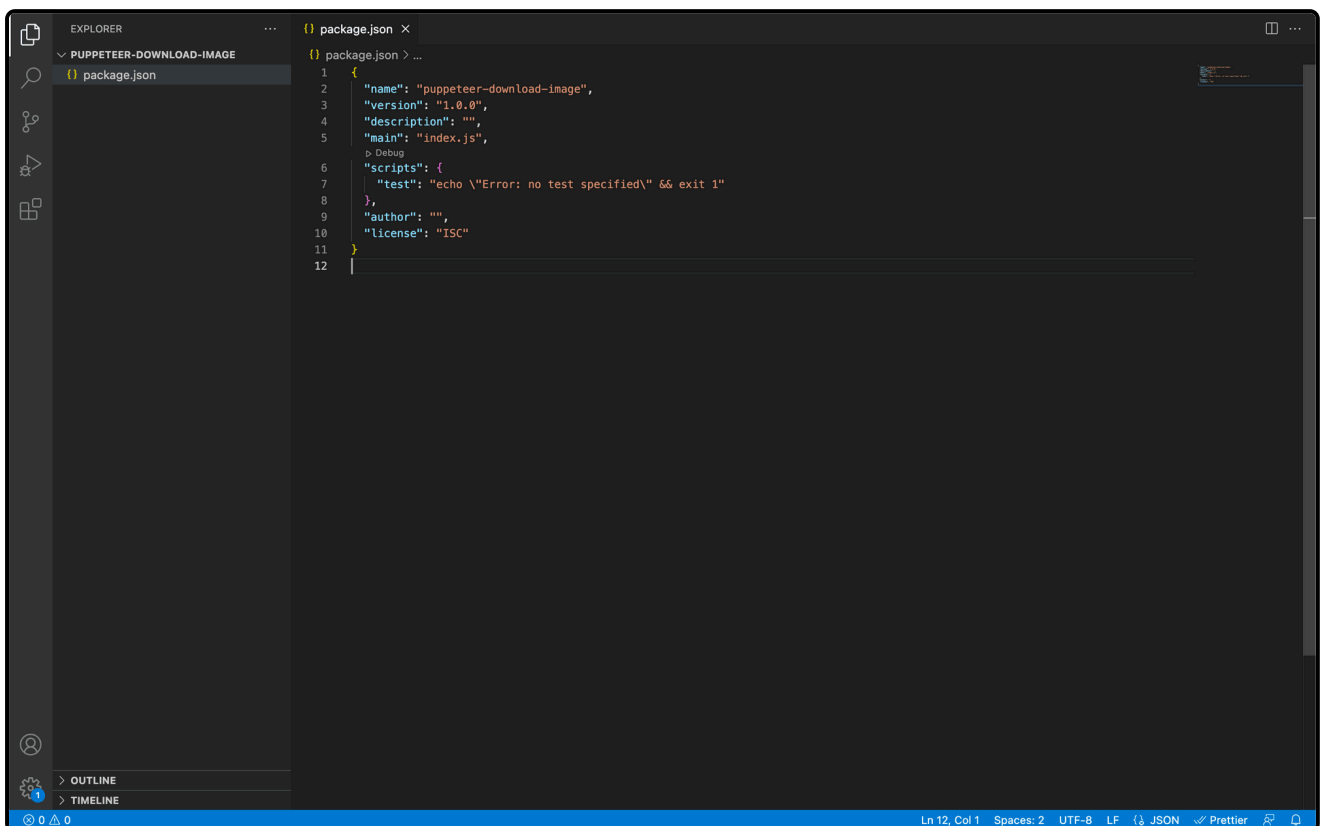
```
mkdir puppeteer-download-images  
cd puppeteer-download-images
```

Init a new Node.js project in the folder.

```
npm init
```

It will prompt you for input for a few aspects of the project, just press enter if you want to use the default values.

Once you run through the `npm init` steps above, a `package.json` file will be generated and placed in the current directory.

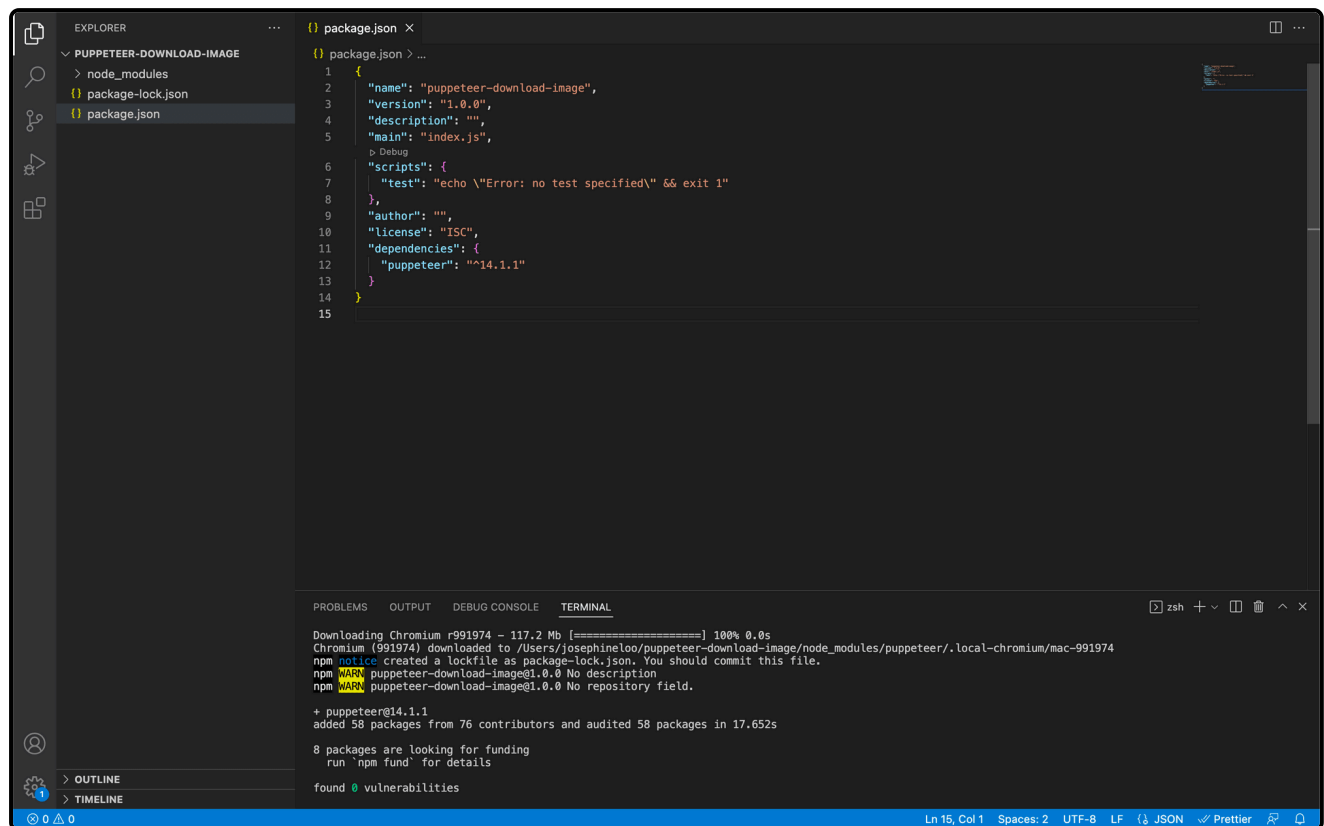


Step 2. Install Puppeteer

Run the command below to install Puppeteer.

```
npm i puppeteer
```

A folder named `node_modules` and a file named `package-lock.json` will be added to your project after running the command.



When you run the command above to install Puppeteer, a recent version of Chromium which is guaranteed to work with the Puppeteer API is also downloaded.

```
Downloading Chromium r991974 - 117.2 Mb [=====] 100% 0.0s
Chromium (r991974) downloaded to /Users/josephineloo/puppeteer-download-image/node_modules/puppeteer/.local-chromium/mac-991974
npm notice created a lockfile as package-lock.json. You should commit this file.
npm WARN puppeteer-download-image@1.0.0 No description
npm WARN puppeteer-download-image@1.0.0 No repository field.

+ puppeteer@14.1.1
added 58 packages from 76 contributors and audited 58 packages in 17.652s

8 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
```

Testing Puppeteer

Before we start writing codes to download images from a website, let's try whether Puppeteer is working properly. We will use a simple example from the [official documentation](#) [↗](#) to take a screenshot of a website.

Step 1. Write the Code

Create a new `example.js` file and paste the following code:

```
const puppeteer = require('puppeteer');

(async () => {
  const browser = await puppeteer.launch();
  const page = await browser.newPage();
  await page.goto('https://google.com');
  await page.screenshot({ path: 'example.png' });

  await browser.close();
})();
```

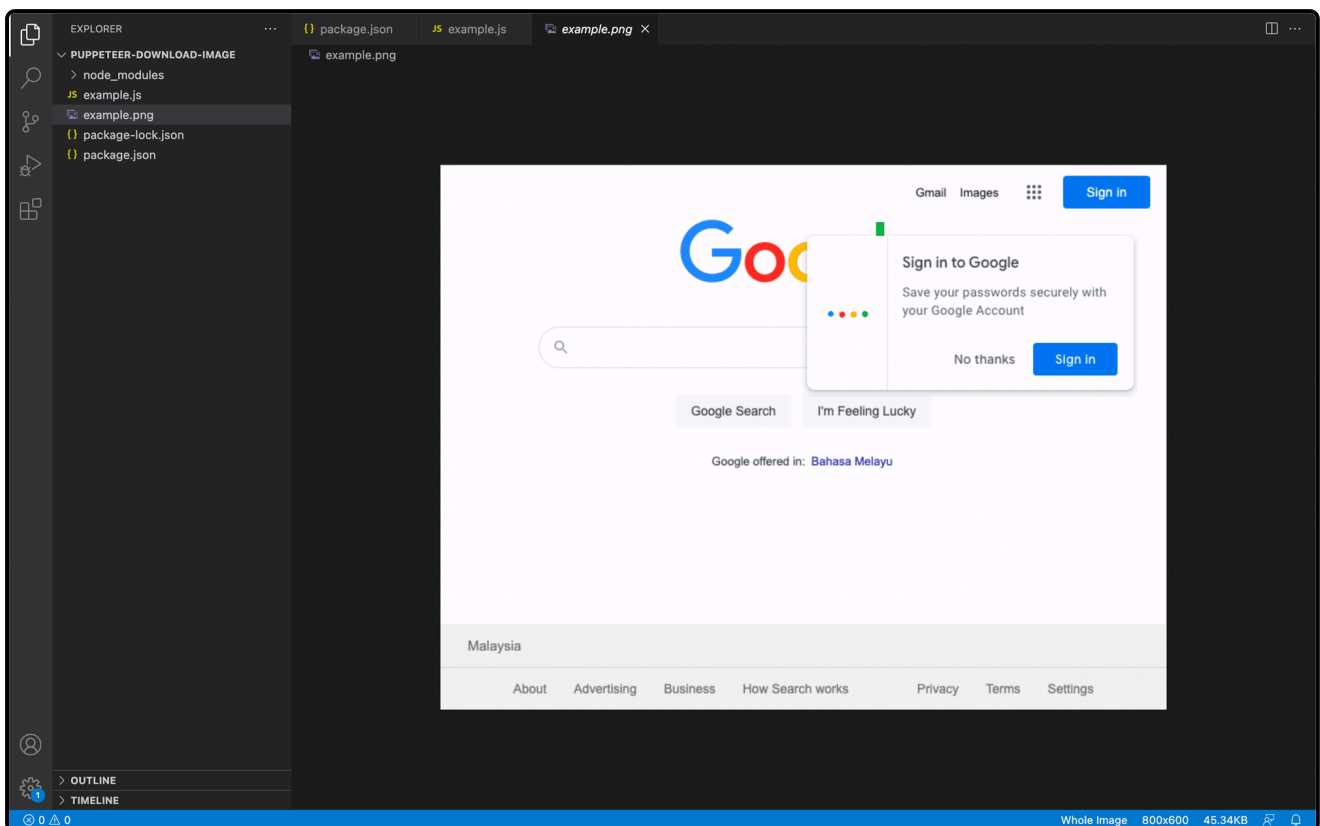
This example creates a page, navigates it to a URL, and then saves a screenshot.

Step 2. Run the Code

Run the `example.js` file to execute the code.

```
node example.js
```

You will find a new image `example.png` created inside your folder. This is the screenshot of the page visited by Puppeteer. 😊

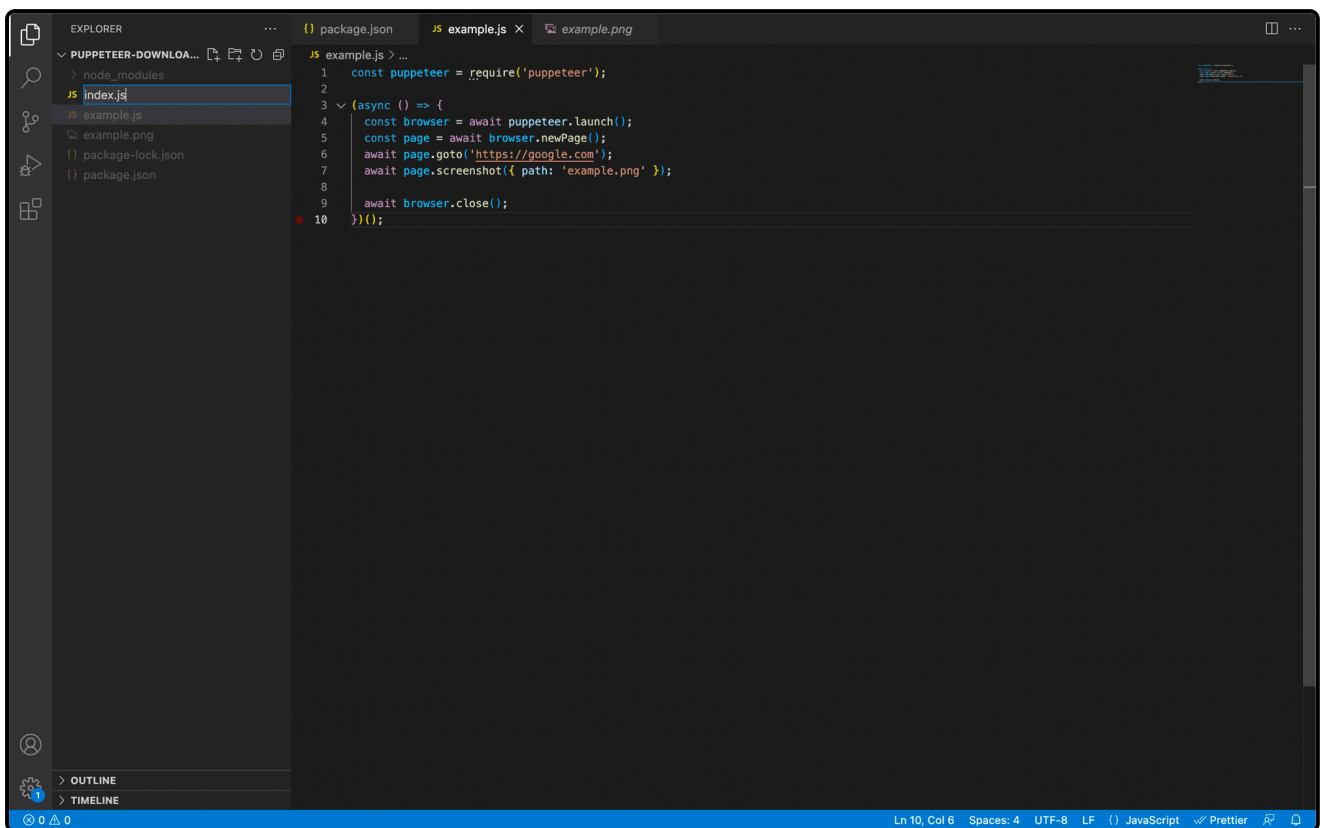


Now we know that Puppeteer is working, we can start writing codes to download images!

Downloading Images from a Website/URL

Step 1. Create a New File

In the same project, create `index.js` file. This is where we will be writing our code to download images from the Bannerbear page.



The screenshot shows a code editor with a dark theme. On the left, the Explorer sidebar shows a file tree with `index.js` selected. The main editor area displays the content of `index.js`, which is a JavaScript file using Puppeteer to launch a browser, navigate to Google, and take a screenshot. The code is as follows:

```
1 const puppeteer = require('puppeteer');
2
3 (async () => {
4   const browser = await puppeteer.launch();
5   const page = await browser.newPage();
6   await page.goto('https://google.com');
7   await page.screenshot({ path: 'example.png' });
8
9   await browser.close();
10 })();
```

The status bar at the bottom indicates the current position is Line 10, Column 6, with 4 spaces, UTF-8 encoding, and LF line endings. It also shows the file is a JavaScript file and has Prettier formatting enabled.

Step 2. Import Modules

Inside the `index.js` file, we need to require `puppeteer` and the `fs` (file system) module. The `fs` module will allow you to write data fetched from the website into a file.

```
const puppeteer = require('puppeteer');
const fs = require('fs');
```

Step 3. Write the Code for Downloading Images

Then, write the following code:

```
(async () => {
  const browser = await puppeteer.launch();
  const page = await browser.newPage();

  let counter = 0;
  page.on('response', async (response) => {
    const matches = /\.*\.(jpg|png|svg|gif)$/.exec(response.url());
    console.log(matches);
    if (matches && (matches.length === 2)) {
      const extension = matches[1];
      const buffer = await response.buffer();
      fs.writeFileSync(`images/image-${counter}.${extension}`, buffer);
      counter += 1;
    }
  });

  await page.goto('https://www.bannerbear.com/solutions/automate');
```

```
    await browser.close();  
  })();
```

Similar to the previous example, Puppeteer will open a page and navigate to the URL. Then, it will catch responses which match the image file extensions (.jpg, .png, .svg, .gif), rename it and save it to a folder named `/images`.

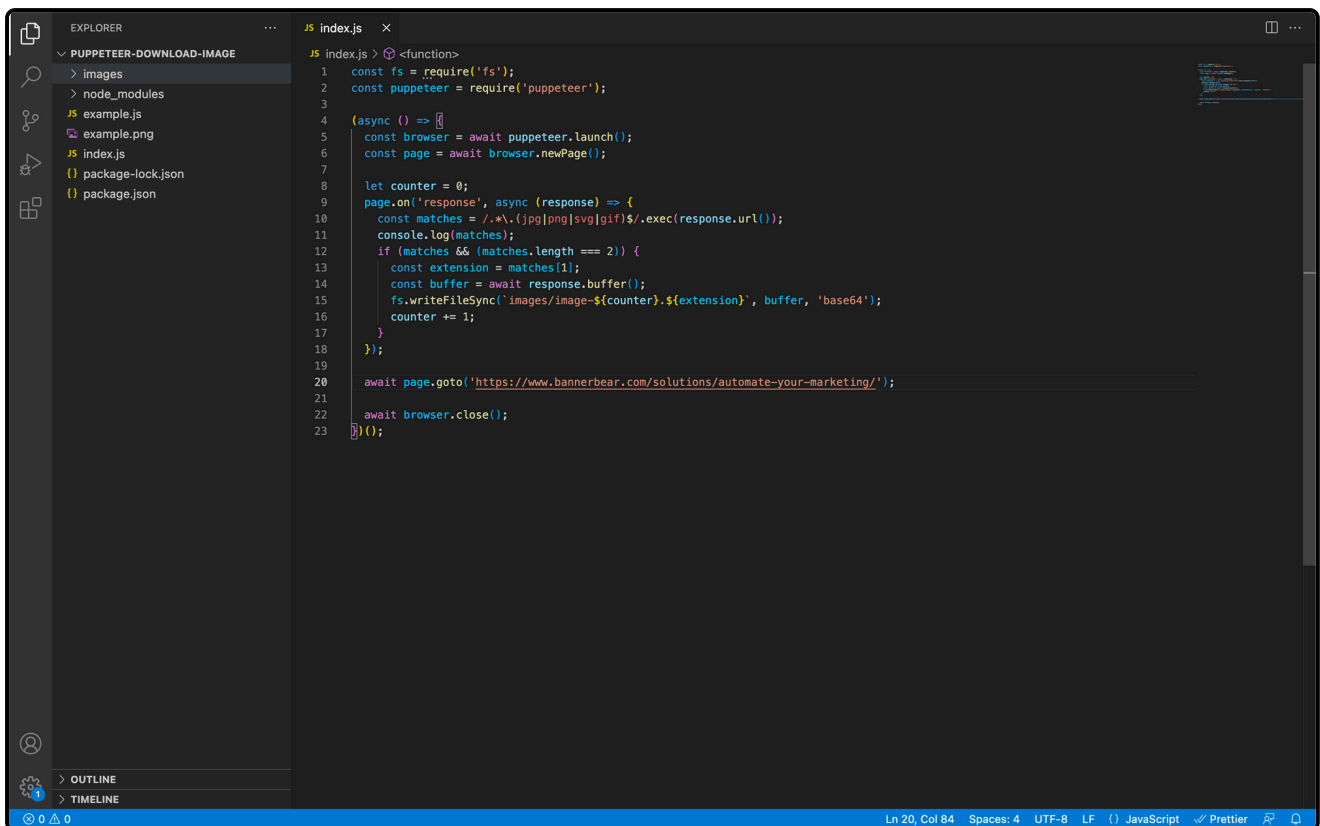
The complete code looks like this.

```
const puppeteer = require('puppeteer');  
const fs = require('fs');  
  
(async () => {  
  const browser = await puppeteer.launch();  
  const page = await browser.newPage();  
  
  let counter = 0;  
  page.on('response', async (response) => {  
    const matches = /.*\.(jpg|png|svg|gif)$/i.exec(response.url());  
    console.log(matches);  
    if (matches && (matches.length === 2)) {  
      const extension = matches[1];  
      const buffer = await response.buffer();  
      fs.writeFileSync(`images/image-${counter}.${extension}`, buffer);  
      counter += 1;  
    }  
  });  
  
  await page.goto('https://www.bannerbear.com/solutions/automate');
```

```
    await browser.close();  
  })();
```

Step 4. Create a New Folder for Images

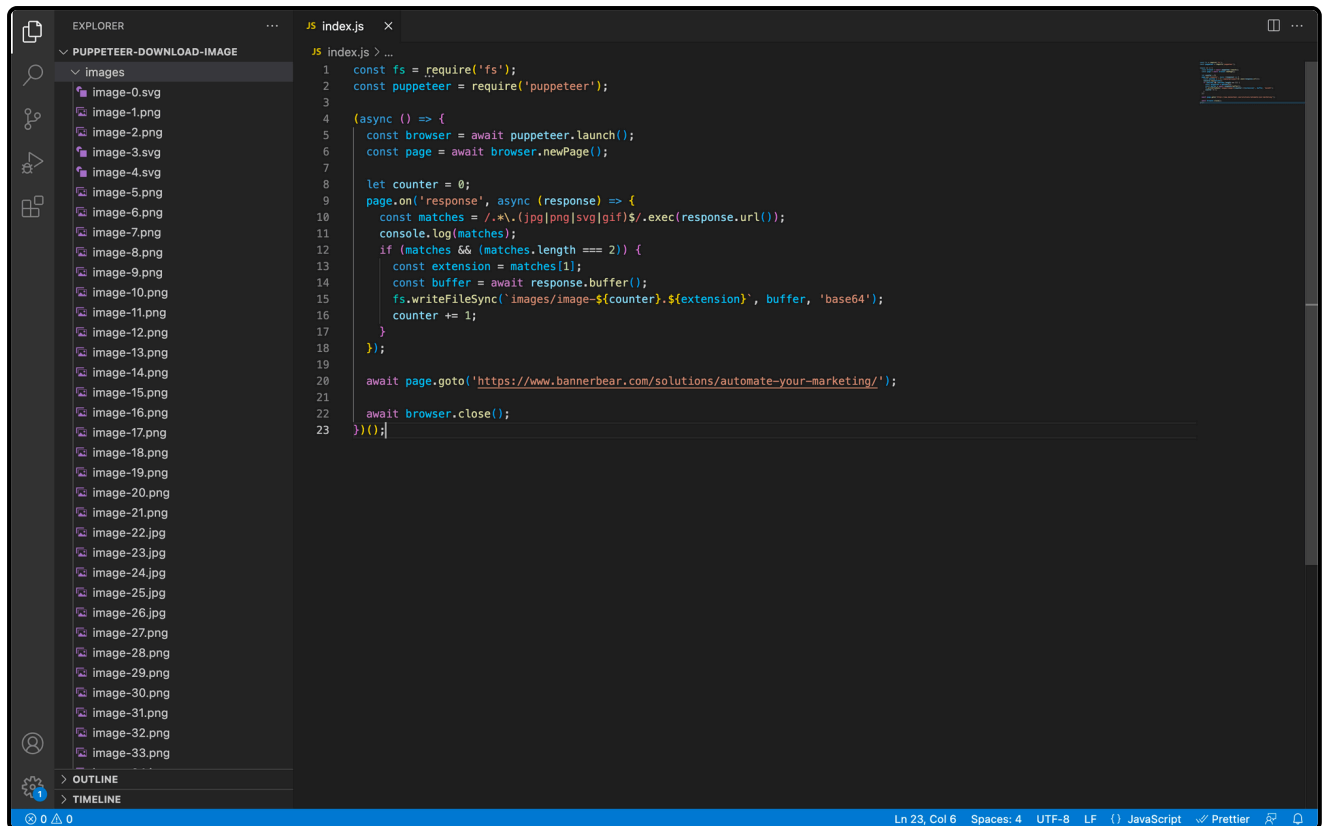
Before executing the code, create a new `/images` subfolder in the current directory. This is where the images downloaded from the page will be saved.



Step 5. Run the Code

Now, run `index.js` and see all images from the page get downloaded into the `/images` folder.

```
node index.js
```



That's it! All images from the Bannerbear page are now downloaded to the `/images` folder. 🥳

You can try this on other websites as well. Simply replace the Bannerbear URL with another URL and then run the `node index.js` command.

Using the Bannerbear API

If you want to process the images like applying an overlay or watermark to them, you can try using the Bannerbear API. The

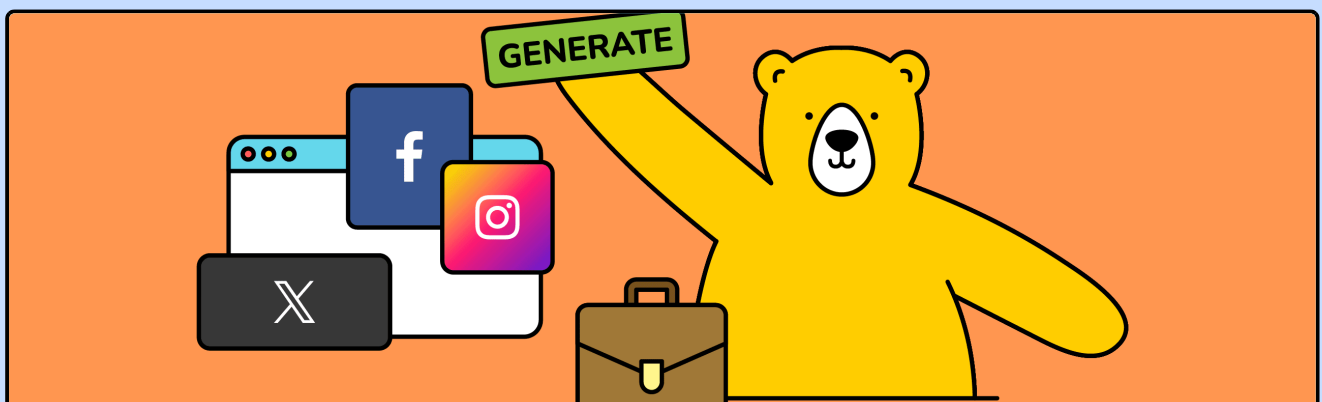
Bannerbear API allows you to create a template that can be applied to all images and generate the images in a few seconds by sending modification requests to the API endpoint. There are also tons of templates in our [template library](#) to choose from if you don't want to create your own template. All you need to do is [sign up](#) for an account and you can start generating images immediately for free! 😊



About the author

Josephine Loo

Josephine is an automation enthusiast. She loves automating stuff and helping people to increase productivity with automation.



September 2024

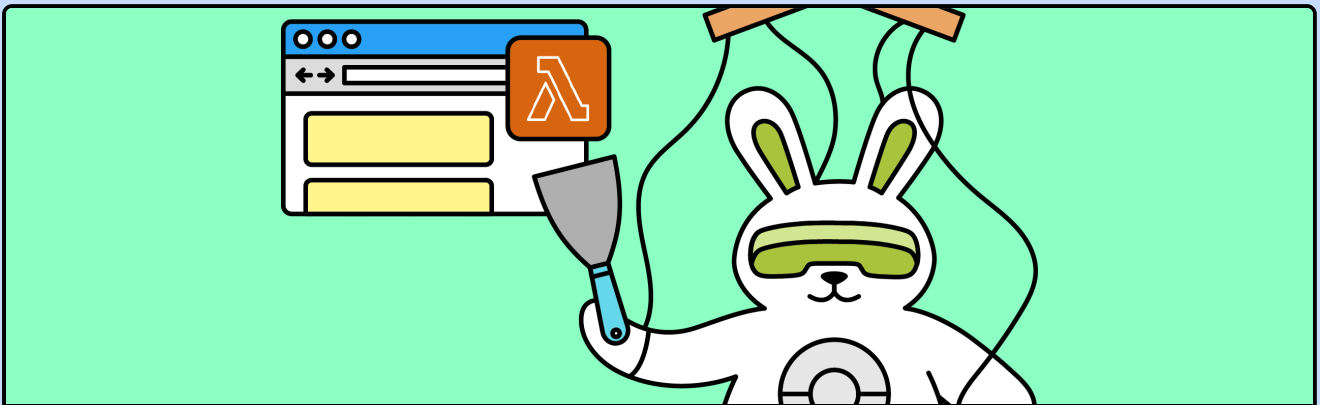
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In Part 2 of our series on auto-generating social media posts for a business conference using Bannerbear, we'll be creating posts for panel sessions. The image for each post will feature key details like the session topic, moderator, and panelists.

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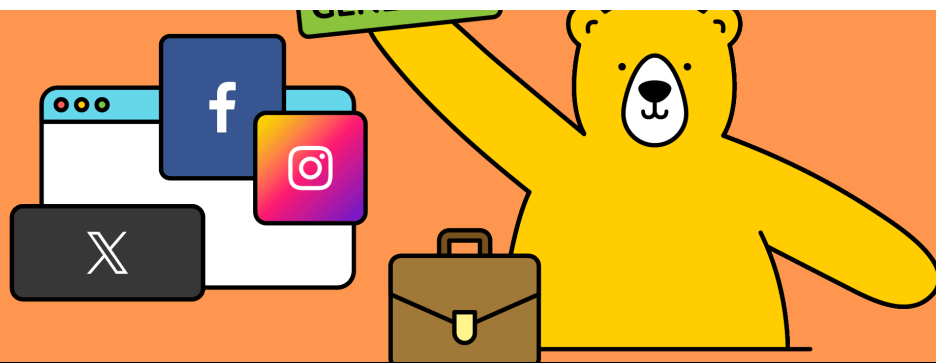
How to Use Puppeteer in AWS Lambda for Web Scraping via Serverless

In this article, we'll explore how AWS Lambda's serverless architecture can simplify the deployment of your Puppeteer tasks and walk you through the process of setting up Puppeteer in AWS Lambda using the Serverless framework.

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