

## Build Free Website with Jekyll on IBM Cloud

Estimated time needed: 40 minutes

In today's highly competitive world, no matter whether you are a new graduate developer or a new startup company must take bold steps to stand out from the crowd. One such step is creating a website that effectively showcases your skills and experience or your business products. A well-designed website serves as a powerful platform to attract potential clients, customers, or employers. And with Jekyll on IBM Cloud Object Storage, it's never been easier to create a stunning website that will help you stand out from the crowd.

With easy-to-follow instructions and a user-friendly interface, you'll be able to build a professional-looking website in no time and setup on IBM Cloud Object Storage for FREE. Plus, with IBM Cloud Object Storage, you can easily have the benefit of these amazing features:

- Free for commercial companies to publish their static web
- Highly scalable for handling large volumes of data and media files
- Supports multiple APIs and protocols for easy integration with various web development tools and platforms
- Enables lightning-fast big file uploads

The project is perfect for developers at any level who isn't well versed in HTML, but before we delve deeper into the project, let's click the button below to gain a better understanding of the type of website we'll be building.

[View Demo](#)

**COGNITIVE CLASS**

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**COGNITIVE CLASS.ai**

# COGNITIVE CLASS

— ★ —

Artificial Intelligence - AI Application - Machine Learning - Web Development - Data Science

## PORTFOLIO



As demonstrated above, this guided project will instruct you on transforming a basic template into a sleek personal portfolio. However, the techniques and principles employed in this project are equally applicable when constructing a business website.

### Learning Objectives

After completing this guided project, you are ready to:

- Build a static website locally using Jekyll.
- Customize Jekyll templates to your liking.
- Host your website on IBM Cloud service.
- Grasp the fundamental concepts of Ruby programming language.

### Prerequisites

- HTML

### What Is Jekyll & Ruby

Jekyll is a static site generator that enables you to create and publish websites quickly and easily. It takes content, usually written in Markdown or HTML, and generates a complete website that can be hosted on any web server. Unlike traditional content management systems like WordPress, Jekyll does not require a database or server-side processing. It generates a series of static HTML pages that can be served by any web server. Jekyll is also secure, easily cached by CDNs, and generates sites quickly, allowing users to focus on creating content rather than worrying about maintenance.

It's important to note that Jekyll is written in Ruby programming language, so it's essential to ensure that you have a complete Ruby development environment set up correctly. Fortunately, Cloud IDE already has the configuration set up for you to start building Jekyll right away. However, it would be beneficial for you to have some basic knowledge of Ruby before we begin the project. If you're new to Ruby, this page can help you learn some of the terminologies.

There are three essential parts of Ruby: Gems, Gemfile, and Bundler.

- **Gems** are packages that contain Ruby code and can be easily shared and reused across different projects. They can include code, documentation, and dependencies and can be installed and managed using the RubyGems package manager. For example, Jekyll and many Jekyll plugins are also gems.
- **Gemfile** is a configuration file used in Ruby projects to specify the gems that the project depends on, along with any version constraints. Typically, the Gemfile is located in the root directory of the project and is used by tools such as Bundler to manage the project's dependencies.
- **Bundler** is a tool used in Ruby projects to manage gem dependencies and ensure that the correct versions of gems are installed. Bundler reads the Gemfile and installs the required gems, along with their dependencies, into a "bundle" that is stored in the project directory.



## What Is IBM Cloud Object Storage

IBM has built a robust portfolio of cloud object storage services over the past several years, all of which are grouped under the vendor's Cloud Object Storage umbrella. IBM offers several tiers of object storage to accommodate both primary and secondary storage use cases, with features including:

- The use of information dispersal algorithms by IBM COS across regional zones to achieve data resilience and high availability of object storage
- Access latency in the tens to hundreds of milliseconds depending on object storage tier, distribution, and data access requirements (e.g., "hot" versus "cold")
- Per object/bucket retention policies
- Granular selection of "cold storage" tiers options (with various data access parameters and price points in terms of dollar per gigabyte per month)
- Direct integration with IBM's artificial intelligence (AI) analytics services
- Physical bulk data transfer as well as high-speed network transfer

In addition to the aforementioned features, IBM COS benefits from a robust ecosystem of partner solutions that includes a range of ISVs and services providers designed to accommodate customer use cases for specialized industry cloud archiving, data migration to the cloud, cloud file storage services, cloud data protection, backup, disaster recovery, and cloud-based analytics.



If you are interested in the detailed about IBM Cloud Object Storage, you can find more resources in the following link: [IBM Cloud Object Storage](#)

## Set Up Your Workspace

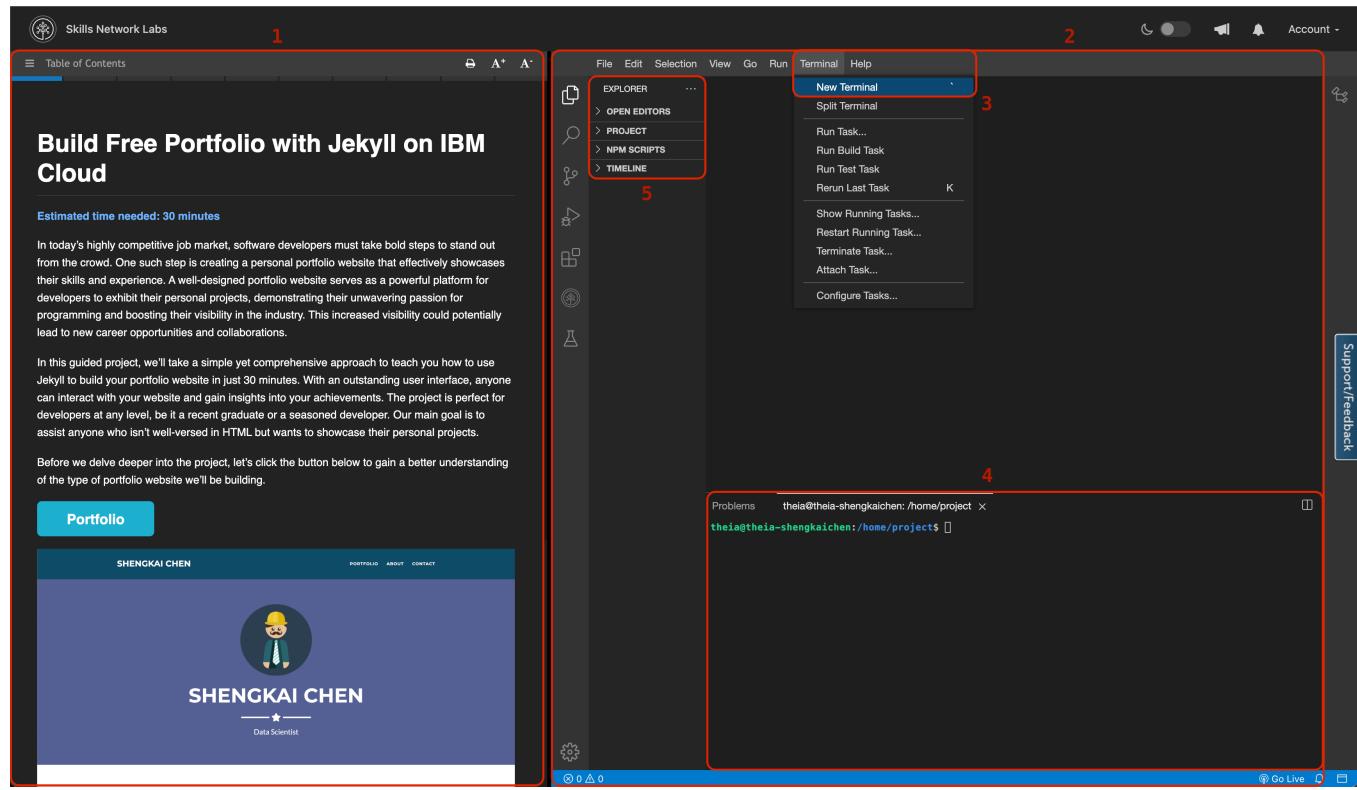
First things first, let's familiarize ourselves with the tools and materials we'll need for the project, including the programming environment and files for your web app.

### Cloud IDE

Cloud IDE, offered by Skills Network labs, is a lab environment that allows you to put your programming skills to the test in a real-world setting. There are many benefits to using Cloud IDE, whether you're developing an application or working with databases such as MySQL, MongoDB, PostgreSQL, Cassandra, or Datasette. To make it easier for developers to adapt to the new environment, Cloud IDE is based on the familiar Visual Studio Code interface, reducing the learning curve.

Here's a breakdown of the components:

1. **Left Panel:** You can access and follow the step-by-step instructions shown in this panel, just like in this guided project, as shown in the screenshot below.
2. **Right Panel:** This is where you'll get hands-on practice with your programming.
3. **Tools Bar:** Within the dedicated section of the toolbar known as the "Terminal," lies the option to create new terminals, named "**New Terminal**." With this convenient feature, you can effortlessly generate as many terminals as necessary to complete your tasks.
4. **Terminal:** This is where you put the command lines.
5. **File Explorer:** Like VS Code, you can create and access your files using the file explorer and make any edits you need in the Cloud IDE environment. You can find the file explorer in the screenshot below.



Just a heads up, Cloud IDE doesn't save any of your files at the moment. To avoid any issues, we strongly suggest you finish this lab in one go.

### Jekyll in Cloud IDE

Before installing Jekyll in Cloud IDE, let's take a closer look at the commands we use to manage Jekyll. The `sudo gem` command is used in the Ruby programming language to manage Gems, which is a package manager for Ruby libraries and applications.

The `sudo` command allows the user to run the `gem` command with elevated privileges, which is necessary for certain operations that require administrative access, such as installing system-wide Gems or updating Gems itself.

To setup Jekyll in Cloud IDE, you need to run the command below by clicking the icon, and it will start to install the required packages:

```
1. 1
2. 2
3. 3
4. sudo gem install public_suffix -v 4.0.7
5. sudo gem install jekyll -v 4.2.2
6. sudo gem install bundler -v 2.3.26
[Copy] [Cancel]
```

### GitHub

Github is a platform that allows developers to create and host their own projects, as well as contribute to other people's projects.

To access these files, we will need to clone them from a GitHub repository. A repository is a location where files for a project are stored. By cloning them, you will be able to make a copy of the files on Cloud IDE, which will be separate from the original files on GitHub.

This guided project will use a prebuilt template to assist you in developing your own website. The template we will be using is called Freelancer, created by several talented programmers. This flat design, one-page Bootstrap portfolio theme is perfect for freelancer portfolios or any other one-page website.

To get started, open the terminal and run the following command by clicking on the icon below. This will clone the template app repository:

```
1. 1
2. git clone https://github.com/Sheng-Kai-IBM/Skills-Network-Jekyll-Freelancer-Theme.git
[Copy] [Cancel]
```

Now that we have cloned the repository, we can navigate to its directory in the terminal by using the `cd` command. This will allow us to work with the files in the repository and make changes as needed.

```
1. 1
2. cd Skills-Network-Jekyll-Freelancer-Theme
[Copy] [Cancel]
```

The `bundle install` is a command used in the Ruby programming language to install the dependencies of a Ruby project using Bundler, which is a package manager for RubyGems.

```
1. 1
2. bundle install
[Copy] [Cancel]
```

Let's take a look at the important files that you will focus on in the template:

The screenshot shows a Cloud IDE interface with a dark theme. On the left, there's a preview of a portfolio website for "SHENGKAI CHEN" (Data Scientist). The site has a blue header with the name and a profile icon, followed by sections for "PORTFOLIO" and "Learning Objectives". A red box highlights the "PROJECT" section in the Explorer sidebar, which lists files like \_includes, \_layouts, \_posts, \_github, css, img, js, mail, \_config.yml, .gitignore, .travis.yml, feed.xml, freelancer-theme..., Gemfile, index.html, LICENCE, Rakefile, README.md, screenshot.png, and style.css. Below the sidebar is a terminal window showing the command "git clone https://github.com/jeromealachaud/freelancer-theme.git" and its execution. The bottom navigation bar includes tabs for "NPM SCRIPTS" and "TIMELINE", and buttons for "Go Live", "master", and "0 △ 0".

Search or jump to... Pull requests Issues Codespaces Marketplace Explore

Sheng-Kai-IBM / Skills-Network-Jekyll-Freelancer-Theme (Public)  
forked from jeromelechaud/freelancer-theme

Code Pull requests Actions Projects Security Insights

master 1 branch 0 tags Go to file Add file <> Code

This branch is 2 commits ahead of jeromelechaud:master.

Sheng-Kai-IBM Update 2014-07-18-project-1.markdown c6dbef0 3 minutes ago 151 commits

.github/ISSUE\_TEMPLATE Update issue templates 4 years ago

\_includes Fix indentation 6 months ago

\_layouts Fix indentation 6 months ago

\_posts Update 2014-07-18-project-1.markdown 3 minutes ago

css/font-awesome Update fontawesome to 6.1.2 (jeromelechaud#146) 7 months ago

img new design 9 years ago

js Update contact\_me.js 6 years ago

mail Disable form mail if spambot fills hidden field 4 years ago

.gitignore added 'jekyll-cache' 4 years ago

.travis.yml Update Travis script 3 years ago

Gemfile Update Gemfile 5 years ago

LICENCE Fixes jeromelechaud#85 5 years ago

Rakefile Add html-proofer script and related fixes 3 years ago

\_config.yml Add html-proofer script and related fixes 3 years ago

feed.xml Updated feed.xml 6 years ago

freelancer-theme-jekyll.gemspec Make theme ruby 3.0 compatible (jeromelechaud#134) last year

index.html Getting rid of unnecessary posts loop 9 years ago

About Jekyll theme based on Freelancer Start Bootstrap theme  
[jeromelechaud.com/freelancer-theme](http://jeromelechaud.com/freelancer-theme)

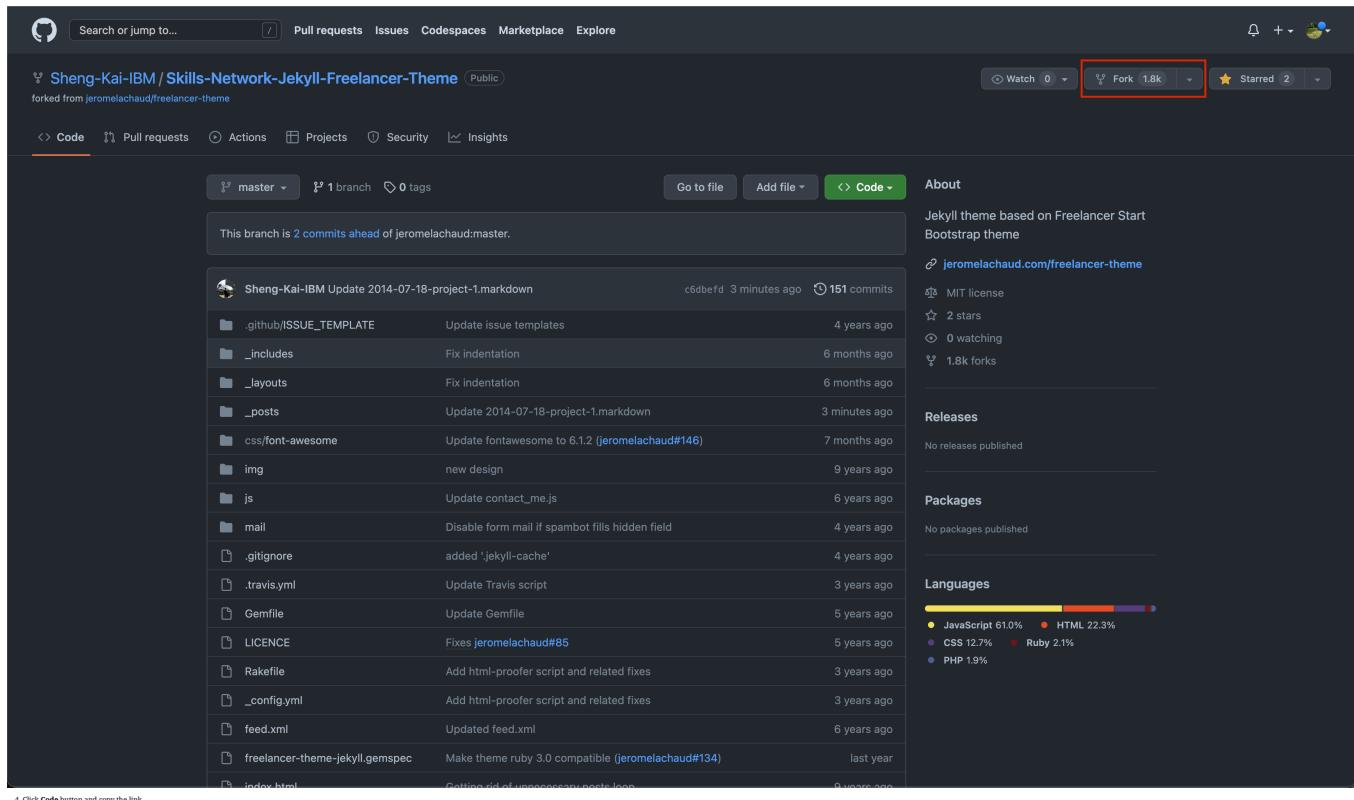
MIT license 2 stars 0 watching 1.8k forks

Releases No releases published

Packages No packages published

Languages JavaScript 61.0% HTML 22.3%  
CSS 12.7% Ruby 2.1%  
PHP 1.9%

4. Click Code button and copy the link.



This branch is 2 commits ahead of jeromelechaud:master.

**Sheng-Kai-IBM Update 2014-07-18-project-1.markdown**

File	Description	Last Commit
.github/ISSUE_TEMPLATE	Update issue templates	9 years ago
_includes	Fix indentation	6 years ago
_layouts	Fix indentation	4 years ago
_posts	Update 2014-07-18-project-1	4 years ago
css/font-awesome	Update fontawesome to 6.1.2	3 years ago
img	new design	9 years ago
js	Update contact_me.js	6 years ago
mail	Disable form mail if spambot fills hidden field	4 years ago
.gitignore	added 'jekyll-cache'	4 years ago
.travis.yml	Update Travis script	3 years ago
Gemfile	Update Gemfile	5 years ago
LICENCE	Fixes jeromelechaud#85	5 years ago
Rakefile	Add html-proofer script and related fixes	3 years ago
_config.yml	Add html-proofer script and related fixes	3 years ago
feed.xml	Updated feed.xml	6 years ago
freelancer-theme-jekyll.gemspec	Make theme ruby 3.0 compatible (jeromelechaud#134)	last year
index.html	Getting rid of unnecessary posts loop	9 years ago

Let's head to the terminal, paste the link you just copied and replace <your URL>, then run the command:

```
1. 1
1. git clone <your URL>
[copy] [second]
```

### Step 1: Update Personal Information

The `_config.yml` file is a configuration file in Jekyll templates, which is a static site generator that is widely used for building websites and blogs. It provides a centralized location for configuring and customizing the site's various settings. It also allows for easy maintaining the site and adds extra functionality through plugins and collections.

Here are some of the functionalities and importance of the `_config.yml` file in Jekyll templates:

- Site Settings: The `_config.yml` file contains various site-wide settings, such as the site's title, description, URL, and author information.
- Theme Settings: Jekyll templates often come with a default theme, and the `_config.yml` file contains settings specific to that theme.
- Plugins: Jekyll supports various plugins that can add extra functionality to the site.
- Collections: Collections are used in Jekyll to group similar content together, such as blog posts or portfolio items.
- Build Settings: The `_config.yml` file contains various build settings, such as the destination folder for the generated site and whether to include drafts or future posts.

And here is where you usually can find this file in the GitHub repository:

[Sheng-Kai-IBM / Skills-Network-Jekyll-Freelancer-Theme](#) Public  
forked from jeromelechaud/freelancer-theme

[Code](#) [Pull requests](#) [Actions](#) [Projects](#) [Security](#) [Insights](#) [Settings](#)

[master](#) [1 branch](#) [0 tags](#) [Go to file](#) [Add file](#) [Code](#)

This branch is 5 commits ahead of jeromelechaud:master.

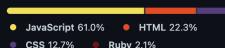
[Contribute](#) [Sync fork](#)

**About**  
Jekyll theme based on Freelancer Start  
Bootstrap theme  
[jeromelechaud.com/freelancer-theme](#)

[MIT license](#)  
2 stars  
0 watching  
1.8k forks

**Releases**  
No releases published  
[Create a new release](#)

**Packages**  
No packages published  
[Publish your first package](#)

**Languages**  


- JavaScript 61.0%
- HTML 22.3%
- CSS 12.7%
- Ruby 2.1%
- PHP 1.9%

File	Description	Last Commit
<a href="#">_config.yml</a>	3/7 new update	last week
<a href="#">feed.xml</a>	Updated feed.xml	6 years ago
<a href="#">freelancer-theme-jekyll.gemspec</a>	Make theme ruby 3.0 compatible (jeromelechaud#134)	last year
<a href="#">index.html</a>	Getting rid of unnecessary posts loop	9 years ago
<a href="#">style.css</a>	Some corrections	9 years ago

As we know the importance of the `_config.yml`, let's include some basic personal information. Start by opening the `_config.yml` file, which can be accessed by clicking the button below.

[Open \\_config.yml](#)

Inside the `_config.yml` file, you'll find several sections that can be easily edited. Simply follow the instructions and update your personal information as needed.

## Basic Information and Header Setting

In the first part of the files, you will find these codes at the beginning of the file. Update the information by instruction:

```

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8
9. # Site settings
10. title: Cognitive Class
11. email: your-email@domain.com
12. url: https://www.codewithSheng-Kai-IBM/Skills-Network-Jekyll-Freelancer-Theme
13. description: "Welcome to EW Cognitive Class"
14. keywords: "Artificial Intelligence, AI Application, Machine Learning, Web Development, Data Science"
15. skills: "Artificial Intelligence - AI Application - Machine Learning - Web Development - Data Science"
16. meta_author: Cognitive Class

```

[Copy](#)

- title is a critical part that will appear in the most prominent place, so it's essential to put your full name there.
- You need to change the email with your personal email address.
- url is the base hostname and protocol for your site. You can simply paste your GitHub repository URL (the link you copy in previous steps) here.
- description & keywords are the information that you want to appear in the Google search results and your feed.xml site description.
- skills is another crucial parameter that displays the words under the title. It's best to include 1-3 positions you are looking for or have previously worked in.
- meta\_author contains the editor's name.

## Color Setting

Here's the section where you can modify the site's color. You can click the icon to copy the code below and then replace the code in [line 27](#) - [31](#), or you can personalize the HEX code to your preferred color.

```

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8
9. 9
10. # Color settings (hex-codes without the leading hash-tag)
11. color:
12.   primary: #4680D3 #800080FF
13.   primary-rgb: "24,288,156" "#128,179,255"
14.   secondary: #E6E6FA #F5F5E6
15.   secondary-dark: #33334D #A2B2C2

```

[Copy](#)

## Social Media Link Setting

You can add your social media links to your portfolio by editing [line 41](#) - [43](#). The title parameter will automatically find the icon related to the string you provide, while the url parameter is where you should add the link you want people to visit.

1. 1

```

2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8
9. 9
10. 10
11. 11
12. 12
1. # Social networks usernames (many more available: google-plus, flickr, dribbble, pinterest, instagram, tumblr, linkedin, etc.)
2. social:
3.   - title: twitter
4.     url: https://twitter.com/cognitiveclass
5.   - title: facebook
6.     url: https://www.facebook.com/cognitiveclass
7.   - title: linkedin
8.     url: https://www.linkedin.com/school/cognitiveclass/
9.   - title: youtube
10.    url: https://www.youtube.com/user/TheBigDataUniversity
11.   - title: github
12.     url: http://github.com/

```

`(copied)`

### Address Setting

In line 14-16, you can include the name of the city where you currently reside. This way, HR or your potential employers can get a general idea of your location.

Note: For security reasons, we advise against including your full mailing address in a public portfolio. Therefore, we recommend only providing city or town information in this section.

```

1. 1
2. 2
3. 3
4. 4
1. # Postal address (add as many lines as necessary)
2. address:
3.   - line: Unionville
4.     - line: Ontario L6G 1C7, Canada

```

`(copied)`

### Step 1-1: Update Personal Information - About Me Description

In this section, you have the opportunity to provide brief personal descriptions that enable others to learn more about you. Simply click the button below to access the about.html file.

`(Open about.html in SDC)`

Within line 12 and line 17, there are two blank paragraphs where you can write about your passions, skills, or any other intriguing details that help others gain a better understanding of who you are. Ensure that each sentence is enclosed by <p> and </p> tags.

On line 21, you can use the button to provide readers with the option of either downloading your resume from a public cloud or visiting your LinkedIn page. You can change the URL beside href= to determine the destination of the button.

```

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8
9. 9
10. 10
11. 11
12. 12
13. 13
14. 14
15. 15
16. 16
17. 17
18. 18
19. 19
20. 20
21. 21
22. 22
23. 23
24. 24
1. <!-- About Section -->
2. <section class="success" id="about">
3.   <div class="container">
4.     <div class="col-lg-12 text-center">
5.       <h2>About</h2>
6.       <br class="star-light">
7.       <div>
8.         <div>
9.           <div class="row">
10.             <div class="col-lg-4 col-lg-offset-2">
11.               <p>Welcome to Cognitive Class! We're glad to have you here, at the beginning of a transformative journey that will give you the ability to master two closely related skills. One has been called "the sexiest profession of the 21st century", and the other is the biggest revolution in the world of computing since the invention of the Turing Machine.</p>
12.             </div>
13.             <div class="col-lg-4">
14.               <p>So, what are you waiting for? Let us explore this brilliant new world of Data Science and Cognitive Computing together. To get started, head to our site and feel free to ask questions to our Student Advisor chatbot or explore our course catalog directly. All our courses are free.</p>
15.             </div>
16.           </div>
17.           <div class="col-lg-8 col-lg-offset-2 text-center">
18.             <a href="https://cognitiveclass.ai/courses" class="btn btn-lg btn-outline">
19.               <i class="fa fa-download"></i> Download
20.             </a>
21.           </div>
22.         </div>
23.       </div>
24.     </div>

```

`(copied)`

### Step 1-2: Update Personal Information - Email

To complete the setup, the final step is to specify the email address that you want people to use to contact you. To do this, open the contact\_me.php file by clicking the button below.

`(Open contact_me.php in SDC)`

In line 21, enter your own email address where you want to receive the contact information.

In line 24, replace yourdomain.com with the domain of your email address, such as Gmail, Yahoo, etc.

```

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8
9. 9
10. 10
11. 11
12. 12
13. 13
14. 14
15. 15
16. 16
17. 17
18. 18
19. 19
20. 20
21. 21
22. 22
23. 23
24. 24
25. 25
26. 26
27. 27
28. 28

```

```

29. 29
30. 30
31. 31
32. 32
33. 33
34. 34
35. 35

1. <?php
2. $email_address = filter_var($_POST['email'], FILTER_VALIDATE_EMAIL);
3. // Check for empty fields
4. if(empty($_POST['name']) || 
5. empty($_POST['email']) || 
6. empty($_POST['phone']) || 
7. empty($_POST['message']) || 
8. empty($_POST['message'])) || 
9. !($email_address)) {
10. {
11. echo "No arguments Provided!";
12. return false;
13. }
14.
15. $name = $_POST['name'];
16. if ($email_address === FALSE) {
17. echo "Invalid email";
18. exit();
19. }
20. $phone = $_POST['phone'];
21. $message = $_POST['message'];
22.
23. if (empty($_POST['gotcha'])) { // If hidden field was filled out (by spambots) don't send!
24. // Create an email and send it
25. $to = 'info@yourdomain.com'; // Add your email address inbetween the '' replacing yourname@yourdomain.com - This is where the form will send a message to.
26. $email_subject = "Website Contact Form - $name";
27. $email_body = "You have received a new message from your website contact form.\n\n". "Here are the details:\nName: $name\nEmail: $email_address\nPhone: $phone\n\nMessage:\n$message";
28. $headers = "From: info@yourdomain.com\n"; // This is the email address the generated message will be from. We recommend using something like no-reply@yourdomain.com.
29. $headers .= "Reply-To: $email_address";
30. mail($to,$email_subject,$email_body,$headers);
31. return true;
32. }
33. echo "Gotcha, spambot!";
34. return false;
35. ?>

```

## Step 2: Update Personal Projects

Now that you have added your personal information to the site, it's time to showcase your projects. To get started, click the button below to access the 2023-03-01-project-1.markdown file.

[Open 2023-03-01-project-1.markdown in \[D\]](#)

In File Explorer, you'll see 5 other markdown files in the \_posts folder. We'll show you how to edit one of these files for your project. If you have fewer than 6 projects, delete the markdown files in sequential order. If you're creating a new markdown file, make sure to follow this naming convention: <date>-project-<id>.

```

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8
9. 9
10. 10
11. 11

1. ***
2. layout: default
3. modal_id: 1
4. date: 2023-03-01
5. img: Improve_Customer_Support_with_AI-powered_Voice_Services.png
6. alt: image alt
7. project_date: March 2023
8. client: IBM Skills Network
9. category: Artificial Intelligence
10. description: Improve Customer Support with AI-powered Voice Services - In this guided project, you will create a voice-enabled pizza-ordering application using embeddable AI and deploy it with Flask. Learn how to use Flask to deploy machine-learning models, allowing anyone to interact with them through an intuitive user interface and see the results for themselves. Don't let the challenge of training AI hold you back - our cutting-edge embeddable AI libraries can be seamlessly integrated into your projects.


```

[copy]

- layout is responsible for determining the style and arrangement of elements on the website, and we can maintain the default setting here.
- modal\_id is an integer used to track the number of projects.
- date represents the time at which this post was edited.
- img refers to the image used to showcase the project alongside others. We suggest adjusting your project image to a specific size of 900 pixels in width and 650 pixels in height.
- alt attribute provides alternative information for an image if a user is unable to view it for any reason.
- project\_date represents the start date of the personal project.
- client can be the name of the company that owns the project.
- category refers to the position or technical aspects related to the project.
- description section allows you to provide a cool summary of your project and how you contributed to its success.

## Upload Project's Image

After completing your personal project description, feel free to personalize the img element with an image of your choosing.

For instance, if you desire to upload a png file named `Improve_Customer_Support_with_AI-powered_Voice_Services.png` to your website, you should locate the `img` folder in the `Explorer` section. Within this folder, you'll find another folder labeled `portfolio`. Right-click on this folder and select the "Upload Files..." option, as shown in the following figure.

**Skills Network Labs**

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## Step 2: Update Personal Projects

Now that you have added your personal information to the site, it's time to showcase your projects. To get started, click the button below to access the [2014-07-18-project-1.markdown](#) file.

[Open 2014-07-18-project-1.markdown in IDE](#)

In File Explorer, you'll see 5 other markdown files in the `posts` folder. We'll show you how to edit one of these files for your project. If you have less than 6 projects, simply delete the markdown files in the order they appear. If you're creating a new markdown file, make sure to follow this naming convention: `<date>-project-<id>`.

```

1 ---  
2 layout: default  
3 modal-id: 1  
4 date: 2023-03-01  
5 img: cabin.png  
6 alt: image-alt  
7 project-date: March 2023  
8 client: IBM  
9 category: Data Scientist  
10 description: Testing new machine-learning models and creating some cool  
11 ---  


```

- `layout` is responsible for determining the style and arrangement of elements on the website, and we can maintain the default setting here.
- `modal-id` is an integer used to track the quantity of projects.
- `date` represents the time at which this post was edited.
- `img` refers to the image used to showcase the project alongside others. We suggest adjusting your project image to a specific size of 900 pixels in width and 650 pixels in height.
- `alt` attribute provides alternative information for an image if a user is unable to view it for any reason.

**File Explorer**

EXPLORER > OPEN EDITORS > PROJECT > freelancer-th... > \_includes > \_layouts > \_posts > 2014-07-13... > 2014-07-14... > 2014-07-15... > 2014-07-16... > 2014-07-17... > 2014-07-1... > \_site > \_github > jekyll-cache > css > img > portfolio > cabin.png > cake.png > circus.png > game.png > safe.png > submarine... > profile.png > js > mail > \_config.yml > .gitignore > .travis.yml > feed.xml > freelancer-the... > Gemfile > Gemfile.lock > index.html > LICENCE > README > NPM SCRIPTS > TIMELINE

File Edit Selection New File New Folder Open in Terminal Select for Compare Copy Paste Copy Path Copy Relative Path Copy Download Link Upload Files... Download Delete Backspace Duplicate Rename F2 Generate .editorconfig Export Workspace Diagrams Fetching jekyll-data 1.1.1 Fetching jekyll-feed 0.17.0 Fetching jekyll-sitemap 1.4.0 Fetching jekyll-gist 1.5.0 Installing jekyll-theme-foundation 0.7.0 Fetching foundation 6.2.2.5 (x86\_64-linux) Installing jekyll-sitemap 1.4.0 Installing jekyll-data 1.1.1 Installing jekyll-gist 1.5.0 Installing foundation 6.2.2.5 (x86\_64-linux) Fetching html-pipeline 2.14.3 Fetching nokogumbo 2.0.5 Installing html-pipeline 2.14.3 Installing nokogumbo 2.0.5 with native extensions Fetching jekyll 4.2.0.0 Installing jemoji 0.13.0 Using freelancer-theme-jekyll 1.0.1 from source at '.' Fetching html-proofer 3.19.1 Installing html-proofer 3.19.1 Bundle complete! 4 gems installed. Use 'bundle int [gemname]' to see where a bundled gem is installed. Post-install message from html-pipeline:  
Thank you for installing html-pipeline!  
You must bundle filter gem dependencies.  
See html-pipeline README.md for more details.  
<https://github.com/jch/html-pipeline#dependencies>

Support/Feedback

master\* 0 0 1 Go Live

### Step 3: Upload Site To IBM Cloud Object Storage

It's time to deploy your website on the cloud. However, before we proceed with the setup on IBM Cloud, it's crucial to verify that the site's functionality and design align with our expectations. To do so, execute the subsequent command:

```
1. 1  
1. bundle exec jekyll serve
```

[Copied! \(Success\)](#)

and click on the Web Application button to evaluate your website.

[Web Application](#)

After you've completed the evaluation, you'll notice a new folder named `_site` in the `Explorer` section. Right-click on this folder and choose the `Download` option, as depicted in the accompanying figure.

The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a Jekyll project structure with files like `index.html`, `LICENCE`, `Rakefile`, `README.md`, `screenshots.css`, and `style.css`.
- Terminal:** Displays the command `jekyll serve` being run, outputting logs about bundle exec and server address.
- Status Bar:** Shows the current branch is `master`, with 0 changes, and other status indicators.

Once downloaded, you'll find a file labeled `_site.tar` in your local download directory. Remember to unzip the file for our upcoming step.

#### Create IBM Cloud Object Storage Instances

Now click the button below to create IBM cloud object storage instances.

##### ATTENTION!

If you haven't already obtained an IBM Cloud Feature Code prior to starting this guided project, kindly return to the previous page to obtain the feature code. With this code, you will be able to create an IBM Cloud account without the need for a credit card.

Additionally, we provide other hands-on tutorials that will guide you step-by-step through the IBM Cloud account creation process.

IBMSkillsNetwork: GPXX0Y4VEN  
Build Free Portfolio Site with Jekyll on IBM Cloud      Learning Paths      Courses & Projects

sheng-kai\_chen\_2 ▾

Course Progress Dates Discussion

### Build Free Portfolio Site with Jekyll on IBM Cloud

Start Course

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▼ Welcome

Obtain an IBM Cloud Code to complete this project

Hands-on Lab: Create a Cloud Account (Lite)

Guided Project

Feedback

Completion (1 Question)

Final Exam

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If you do not yet have an account, there is no need to fret. Simply follow the hands-on tutorials or click on "Create an account," as displayed in the accompanying figure. This service is entirely free for anyone to utilize.

IBM Cloud

Catalog / Services /

## Cloud Object Storage

Author: IBM • Date of last update: 2022-07-06 10:19 AM • Docs • API docs

Create About

Choose an Infrastructure

**IBM Cloud** Create, manage, and access your storage in globally available data center locations. Public cloud environments are designed for high durability, resiliency and security. IBM-managed infrastructure automatically scales to businesses needs.

**Satellite** Utilize infrastructure from on-premise data centers, at other cloud providers, or in edge networks as a Satellite location to IBM Cloud. Deploy, manage and control app workloads with IBM Cloud Object Storage on client-managed infrastructure.

Select a pricing plan  
Displayed prices do not include tax. Monthly prices shown are for country or region:[Canada](#)

Plan	Features	Pricing
Lite	Lite plan instance is free to use for Storage capacity up to 25 GB per month. Lite plan instance is used for trial, and can be easily upgraded to Standard plan for unlimited scalability and full functionality.	Free
Standard	Standard plan is our most popular Pay-as-You-Go pricing plan. There is no minimum fee. This plan meets the requirements of most of the enterprise workloads.	<a href="#">View storage class pricing</a>
One Rate	One Rate plan offers a flat monthly charge that includes capacity, and built-in allowances for outbound bandwidth and data access. It is best suited for active workloads with large amounts of outbound bandwidth as a percent of their storage capacity.	<a href="#">View storage class pricing</a>

Upon logging into your account, our next task is to establish a new Cloud Object Storage Instance. Follow the steps outlined in the following figure:

1. Choose IBM Cloud
2. Select the Lite Plan
3. Assign a name to your server (for instance, we used "Cloud Object Storage-y0" as an example)
4. Create an Instance

**Summary**

**Cloud Object Storage** **Free**  
Plan: Lite

[Sign up to create](#)

[Add to estimate](#)

Already have an account? [Log in](#)

The screenshot shows the IBM Cloud interface for creating a new service. The process is divided into four main steps:

- Choose an Infrastructure**: Step 1, highlighted with a red box labeled 1. It lists two options: **IBM Cloud** (selected) and **Satellite**. The **IBM Cloud** option is described as managing storage in globally available data center locations.
- Select a pricing plan**: Step 2, highlighted with a red box labeled 2. It shows three plan options: **Lite** (selected), **Standard**, and **One Rate**. The **Lite** plan is described as being free for up to 25 GB per month. The **Standard** plan is described as a Pay-as-You-Go plan with no minimum fee. The **One Rate** plan offers a flat monthly charge.
- Configure your resource**: Step 3, highlighted with a red box labeled 3. It requires entering a **Service name** (e.g., "Cloud Object Storage-y0") and selecting a **Resource group** (e.g., "Default").
- Summary**: Step 4, highlighted with a red box labeled 4. It provides a summary of the selected configuration: **Cloud Object Storage**, **Region: Global**, **Plan: Lite**, **Service name: Cloud Object Storage-y0**, and **Resource group: Default**. A large blue **Create** button is prominently displayed.

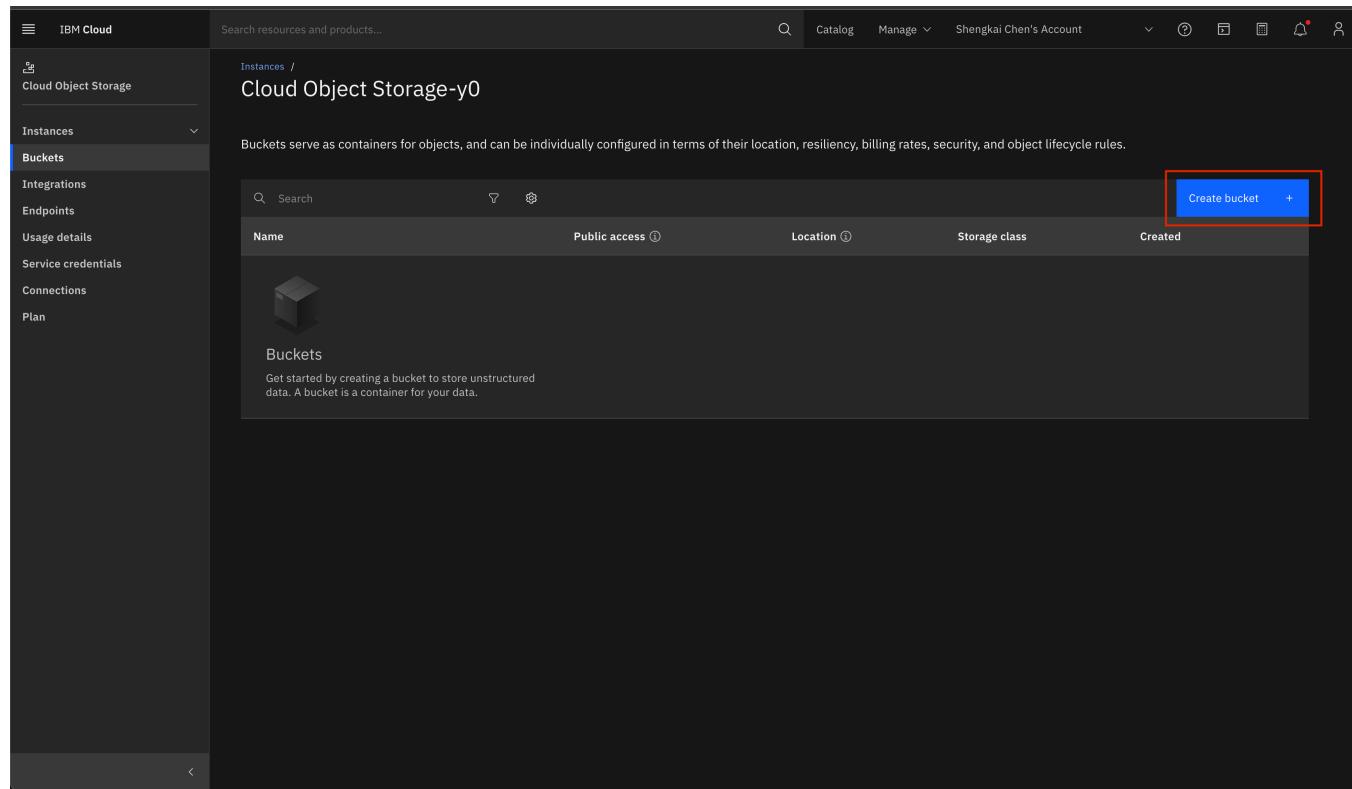
The screenshot shows the IBM Cloud interface for managing Cloud Object Storage Instances. The left sidebar has a 'Cloud Object Storage' section under 'Instances'. The main area is titled 'Cloud Object Storage Instances' and contains a table with one row. The table columns are Name, Group, Location, Status, and Tags. The single row shows 'Cloud Object Storage-y0' as the Name, 'Default' as the Group, 'Global' as the Location, 'Active' as the Status, and an empty Tags field. A 'Create instance' button is visible at the top right of the table area. Below the table, there are dropdowns for 'Items per page' (set to 10) and a page indicator '1 of 1 page'.

Name	Group	Location	Status	Tags
Cloud Object Storage-y0	Default	Global	Active	-

Items per page: 10 | 1-1 of 1 item

**Create Bucket**

Now click on the Create bucket button.



The screenshot shows the IBM Cloud interface for Cloud Object Storage. The left sidebar has a dark theme with the following navigation items:

- IBM Cloud
- Cloud Object Storage
- Instances
- Buckets** (selected)
- Integrations
- Endpoints
- Usage details
- Service credentials
- Connections
- Plan

The main content area is titled "Cloud Object Storage-y0" and displays the "Buckets" section. It includes a search bar, filter icons, and a table header with columns: Name, Public access, Location, Storage class, and Created. A prominent blue button labeled "Create bucket" with a plus sign is located at the top right of the table area, which is highlighted with a red box.

**Buckets**  
Get started by creating a bucket to store unstructured data. A bucket is a container for your data.

Then you will see the page with different options to create different types of buckets, but here you should choose *Customize your bucket*.

The screenshot shows the 'Create bucket' page in the IBM Cloud Object Storage service. The left sidebar has a dark theme with a navigation menu:

- IBM Cloud
- Cloud Object Storage
- Instances
- Buckets** (selected)
- Integrations
- Endpoints
- Usage details
- Service credentials
- Connections
- Plan

The main content area has a light background. At the top, there's a search bar and a header with 'Catalog', 'Manage', 'Shengkai Chen's Account', and other account-related icons.

## Create bucket

Get started by creating a bucket to store unstructured data. A bucket is a storage resource available in IBM Cloud Object Storage service. The bucket can be used to organize objects (storage data) along with their metadata. Create a custom bucket of your own, or choose from our pre-defined configurations.

**Customize your bucket**

Create a bucket by selecting bucket configurations that meet your object storage needs.

**Predefined buckets**

**Quickly get started**

Create a Smart Tier storage class bucket in a region close to you and a service credential to connect your application.

Show more →

**Archive your data**

Create a Smart Tier storage class bucket in a region close to you with an archive rule and a service credential to connect your application.

Show more →

**Host a static website**

Create a Smart Tier storage class bucket in a region close to you with static web hosting configuration and a service credential to connect your application.

Show more →

Please adhere to the steps outlined in the following figure to set up your bucket, leaving all other settings as default:

1. Assign a name to your bucket (ensure that you employ the same name utilized in Step 1)
2. Choose the Single Site option
3. Select Smart Tier

Custom bucket 1

Unique bucket name  
ibm-portfolio

Bucket naming rules:

- Must be unique across the **whole** IBM Cloud Object Storage system
- Do not use any personal information (any part of a name, address, financial or security accounts or SSN)
- Must start and end in alphanumeric characters (3 to 63)
- Characters allowed: lowercase, numbers and nonconsecutive dots and hyphens

Resiliency View options 2

Cross Region Highest availability

Regional Best performance

Single Site Data sovereignty

Location View options 3

ams03

Storage class View pricing

Smart Tier New! 3

Smart Tier automatically gives you the lowest storage rate based on your monthly activity.

Standard

For active workloads that require higher performance and low latency and where data needs to be accessed frequently.

Vault

For less active workloads that require infrequent data access (accessed once a month or less).

Cold Vault

For cold workloads where data is primarily archived (accessed a few times a year).

Upon successfully creating the bucket, you'll find the subsequent information displayed in the top right corner. Next, click on the upload button.

The screenshot shows the IBM Cloud Object Storage interface. On the left sidebar, under the 'Buckets' section, there is a red box highlighting the 'Upload' button. A green success message at the top right says: 'A bucket created successfully! The bucket ibm-portfolio has been created and is now available to add objects.' Below the message, a yellow warning box states: 'Warning: All objects in this bucket have public view access.' At the bottom of the page, a note says: 'Refer to the instructions in the accompanying figure to upload the \_site folder that you recently downloaded from the Cloud IDE.'

The screenshot shows the IBM Cloud Object Storage interface. On the left, the sidebar includes 'IBM Cloud', 'Cloud Object Storage' (selected), 'Instances', 'Buckets', 'Integrations', 'Endpoints', 'Usage details', 'Service credentials', 'Connections', and 'Plan'. The main area shows a bucket named 'ibm-portfolio'. A warning message states: 'Warning: All objects in this bucket are public.' Below it, a file browser window is open, showing a local directory structure with 'Documents' selected. A red box labeled '3' highlights the 'Documents' folder. The right side of the screen displays an 'Upload' dialog box. A red box labeled '1' highlights the 'Choose upload type' section, which contains two options: 'Standard transfer' (selected) and 'Aspera high-speed transfer'. A red box labeled '2' highlights the 'Upload files (objects)' section, which includes a note about replacing duplicate files and a 'Drag and drop files and folders or click to upload' area. A red box labeled '3' highlights the 'Upload folders' button. At the bottom of the dialog are 'Cancel' and 'Upload' buttons.

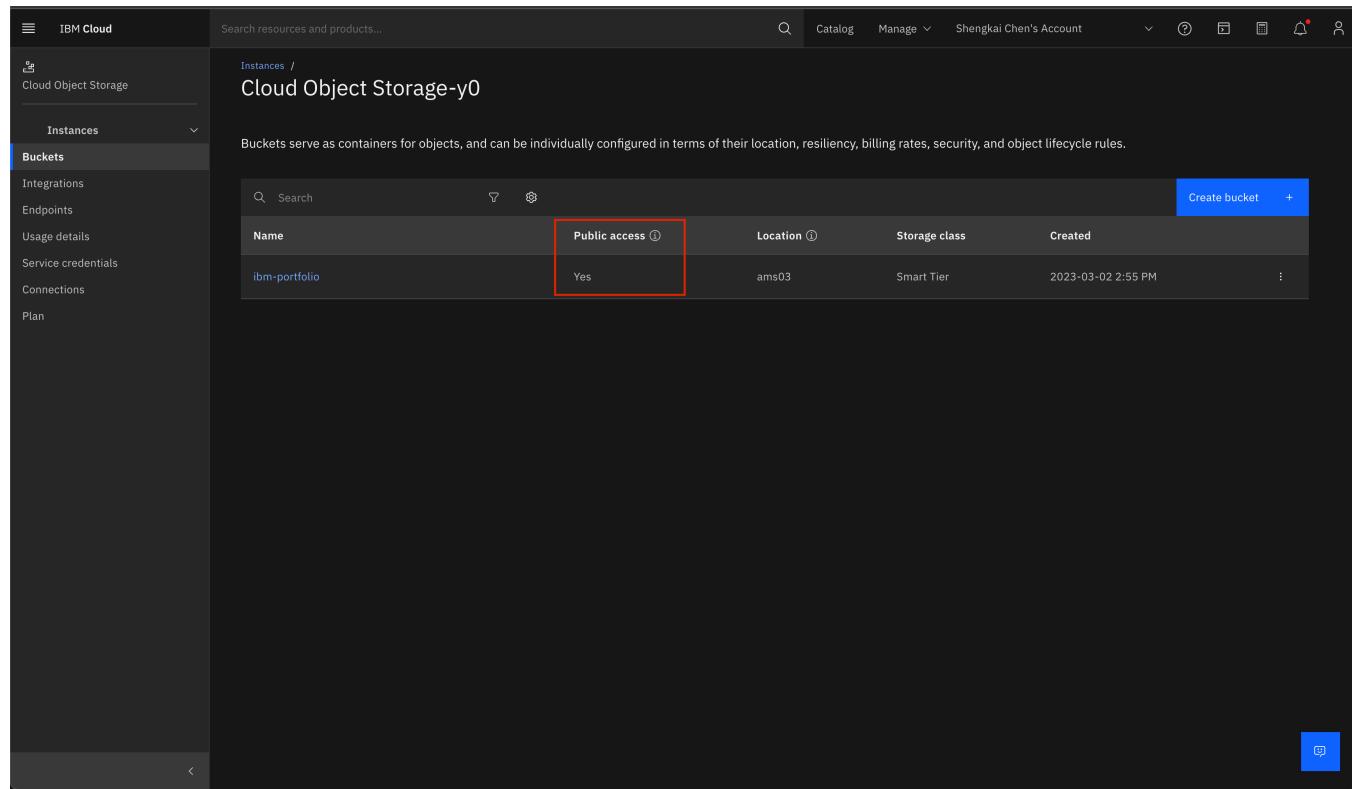
#### Edit Bucket Policy

Last but not least, it is imperative that you make this bucket public so that individuals can access your portfolio site. To begin, navigate to the **Permissions** section located at the top of the page. Select **Public access** and modify the **Role for this bucket** to **Object Reader**. Then, create an access policy according to the figure depicted below.

The screenshot shows the IBM Cloud Cloud Object Storage interface. On the left, a sidebar menu is open with the 'Buckets' option selected. The main content area displays the 'ibm-portfolio' bucket details. At the top, there are tabs for 'Objects', 'Configuration', and 'Permissions'. The 'Permissions' tab is highlighted with a red box and the number '1'. Below it, under 'Bucket access policies', there is a warning about granting public access. A red box highlights the 'Public access' section under 'Access policies' with the number '2'. In the 'Role for this bucket:' dropdown, 'Object Reader' is selected, with a red box around it and the number '3'. Other options in the dropdown include 'Content Reader' and 'Object Reader'. There are also sections for 'Context-based restrictions' and 'Firewall (legacy)'.

Upon successfully creating the policy, you will receive the subsequent message:

The screenshot shows the IBM Cloud Cloud Object Storage interface. On the left, a sidebar navigation includes 'IBM Cloud' (selected), 'Cloud Object Storage' (selected), 'Instances', 'Buckets' (selected), 'Integrations', 'Endpoints', 'Usage details', 'Service credentials', 'Connections', and 'Plan'. The main content area shows 'ibm-portfolio' under 'Cloud Object Storage-y0 / ibm-portfolio'. The 'Permissions' tab is selected, showing 'Bucket access policies'. A modal window titled 'Access group policy created' displays a warning message: 'Warning: Granting access, Public Access. To delete/edit go to the IAM console.' Below the message, it says 'Status: Enabled' and 'Role for this bucket: Object Reader'. A blue button labeled 'Create access policy' is visible. The background shows other sections like 'Context-based restrictions' and 'Firewall (legacy)'. At the bottom, a note states: 'You will also observe that the Public Access to your bucket has switched from No to Yes.'



IBM Cloud

Search resources and products...

Catalog Manage Shengkai Chen's Account

Instances / Cloud Object Storage

Buckets

Cloud Object Storage-y0

Buckets serve as containers for objects, and can be individually configured in terms of their location, resiliency, billing rates, security, and object lifecycle rules.

Name	Public access ⓘ	Location ⓘ	Storage class	Created
ibm-portfolio	Yes	ams03	Smart Tier	2023-03-02 2:55 PM

Create bucket +

Now, wait approximately 2-3 minutes to allow for the cloud to update the policy. Afterward, [reload](#) the bucket page that encompasses all the files you recently uploaded. Enter "`_siteindex`" in the Prefix filter to locate our target file.

The screenshot shows the IBM Cloud Object Storage interface. On the left, a sidebar lists various services: IBM Cloud, Instances, Buckets, Integrations, Endpoints, Usage details, Service credentials, Connections, and Plan. The 'Buckets' section is expanded, showing one bucket named 'ibm-portfolio'. The main panel displays the contents of this bucket under the 'Objects' tab. A warning message at the top states: 'Warning: All objects in this bucket have public view access.' Below it, a note says: 'If you're seeing more usage than expected, versions count towards your usage or you may have incomplete uploads [Learn more](#)'. A search bar contains the query '\_site/index'. A single object is listed: '\_site/index.html' (Size: 21.1 KB, Last modified: 2023-03-02 3:00 PM). A red box highlights the search bar, another red box highlights the object name '\_site/index.html', and a third red box highlights the file extension '.html'. A blue 'Upload' button is visible on the right. At the bottom, a note reads: 'When you select the index.html file, you will come across an Object Public URL. This link represents the public portfolio that you may freely share with others.'

The screenshot shows the IBM Cloud Cloud Object Storage interface. On the left, a sidebar lists various services: Cloud Object Storage, Instances, Buckets, Integrations, Endpoints, Usage details, Service credentials, Connections, and Plan. The main panel displays the details for the object `_site/index.html`. The object was last modified on 2023-03-02 at 3:00 PM, has a size of 21.1 KB, and is stored in the Smart Tier. The Object Public URL is highlighted with a red box and is shown as [https://ibm-portfolio.s3.amazonaws.cloud/\\_site/index.html](https://ibm-portfolio.s3.amazonaws.cloud/_site/index.html). Below it, the Object Data Engine URL is shown as `cos://ams03/ibm-portfolio/_site/index.html`. A message indicates that there is no Data Engine instance available and provides a link to provision one. At the bottom, there is a button to "Open in Data Engine".

### Congratulation !

You've just integrated Jekyll with your first portfolio on IBM Cloud, which will work seamlessly on any modern web browser. Give yourself a pat on the back and have a look at your final result by running the command and clicking the link below:

[https://ibm-portfolio.s3.amazonaws.cloud/\\_site/index.html](https://ibm-portfolio.s3.amazonaws.cloud/_site/index.html)

The end result should resemble something like this:

COGNITIVE CLASS

PORTFOLIO ABOUT CONTACT



# COGNITIVE CLASS.ai

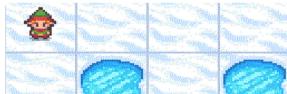
## COGNITIVE CLASS

— ★ —

Artificial Intelligence - AI Application - Machine Learning - Web Development - Data Science

## PORTFOLIO

— ★ —



### Next Steps

Now you are able to edit the majority of the Jekyll templates and publish it free on IBM Cloud.

Here is the link to the author who created these fantastic Jekyll templates. You can visit his site and maybe give a star to his GitHub repository.

Web: <https://jekyllthemes.io/theme/freelancer-theme>

Github: <https://github.com/jpmelachaud/freelancer-theme>

If you're keen to keep learning about more cool things about web deployment or machine learning, head on over to [Cognitive Class.ai](https://cognitive-class.ai) for some amazing guided projects.

### Author(s)

[Sheng-Kai Chen](#) is a graduate student at the University of Toronto, concentrating on Information Systems & Design. Having several experiences analyzing data for retail stores and designing small software for small businesses, Sheng-Kai was inspired to shift toward answering new challenges with machine learning.

### Other Contributor(s)

[Joseph Santarcangelo](#) has a Ph.D. in Electrical Engineering, his research focused on using machine learning, signal processing, and computer vision to determine how videos impact human cognition. Joseph has been working for IBM since he completed his PhD.

[Sina Naseri](#) is an accomplished Research Associate, Ph.D. candidate, and IBM Data Scientist, specializing in unraveling complex data structures to extract insights and provide valuable guidance. My data science experience spans diverse projects, from analyzing DNA sequences to educational and financial data.

### Changelog

Date	Version	Changed by	Change Description
2023-09-01	0.1	Joseph S.	Review project
2023-03-01	0.1	Sina N.	Review project
2023-02-21	0.1	Shengkai C.	Initial version created