



```
#####  
## Build and Deploy Hugo Website to GitHub Pages  
## Author: Jérémie Lumbroso <lumbroso@seas.upenn.edu>  
## Date: 2024-02-24  
#####  
name: 🚀 Build and Deploy GitHub Pages  
on:  
  push:  
    branches:  
      - main # Set a branch to deploy  
jobs:  
  deploy:  
    runs-on: ubuntu-22.04  
    steps:  
      - name: 📄 Check Out Source Repository  
        uses: actions/checkout@v3.5.1  
        with:  
          submodules: true # Fetch Hugo themes (true OR recursive)  
          fetch-depth: 0 # Fetch all history for .GitInfo and .Lastmod  
      - name: 🏗 Initialize Hugo Environment  
        uses: peaceiris/actions-hugo@v2.6.0  
        with:  
          hugo-version: "0.144.1"  
          extended: true  
      - name: 📦 Compile Hugo Static Files  
        run: hugo -D --gc --minify  
      - name: 🚀 Publish to GitHub Pages  
        uses: peaceiris/actions-gh-pages@v3.9.3  
        with:
```

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```
user_email: gh-actions[bot]@users.noreply.github.com  
## NOTE: uncomment below if using a custom domain  
## cname: mydomain.com can you explain this line by line
```

This is a GitHub Actions workflow file for building and deploying a Hugo website to GitHub Pages. Let me explain it line by line:

yaml

```
#####  
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## Author: Jérémie Lumbroso <lumbroso@seas.upenn.edu>  
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#####
```

These are comment lines providing metadata about the workflow file - its purpose, author, and creation date.

yaml

```
name: 🚀 Build and Deploy GitHub Pages
```

This sets the name of the workflow as it will appear in the GitHub Actions interface.

yaml

```
on:  
  push:  
    branches:  
      - main # Set a branch to deploy
```

This defines when the workflow will run - specifically, it triggers whenever changes are pushed to the `main` branch.

yaml

```
jobs:  
  deploy:  
    runs-on: ubuntu-22.04
```

This begins the definition of jobs in the workflow. There's one job called `deploy` that runs

on an Ubuntu 22.04 virtual machine.

```
yaml
steps:
  - name: 📄 Check Out Source Repository
    uses: actions/checkout@v3.5.1
    with:
      submodules: true # Fetch Hugo themes (true OR recursive)
      fetch-depth: 0 # Fetch all history for .GitInfo and .Lastmod
```

The first step checks out the repository code, including any submodules (often used for Hugo themes) and fetches the complete Git history.

```
yaml
  - name: 🚀 Initialize Hugo Environment
    uses: peaceiris/actions-hugo@v2.6.0
    with:
      hugo-version: "0.144.1"
      extended: true
```

This step sets up Hugo in the build environment using a pre-built action. It specifies version 0.144.1 of Hugo and enables the "extended" version which supports additional features like Sass/SCSS processing.

```
yaml
  - name: 📁 Compile Hugo Static Files
    run: hugo -D --gc --minify
```

This runs the Hugo command to generate the static website files:

- `-D` includes draft content
- `--gc` runs garbage collection during the build
- `--minify` compresses the HTML, CSS, JS, etc. to reduce file sizes

```
yaml
  - name: 🚀 Publish to GitHub Pages
    uses: peaceiris/actions-gh-pages@v3.9.3
    with:
      github_token: ${ secrets.GITHUB_TOKEN }
      publish_branch: gh-pages
      user_name: "github-actions[bot]"
      user_email: "github-actions[bot]@users.noreply.github.com"
```

This final step publishes the built site to GitHub Pages:

- Uses a token to authenticate with GitHub (automatically provided by GitHub Actions)
- Pushes the built site to the `gh-pages` branch
- Sets the Git commit author to the GitHub Actions bot

```
yaml
  ## NOTE: uncomment below if using a custom domain
  ## cname: mydomain.com
```

These commented lines explain how to set up a custom domain. If you want your GitHub Pages site to use a custom domain instead of the default `username.github.io`, you would uncomment and set the `cname` parameter to your domain.

📄 📁 🚀 Retry ▾



Claude can make mistakes. Please double-check responses.