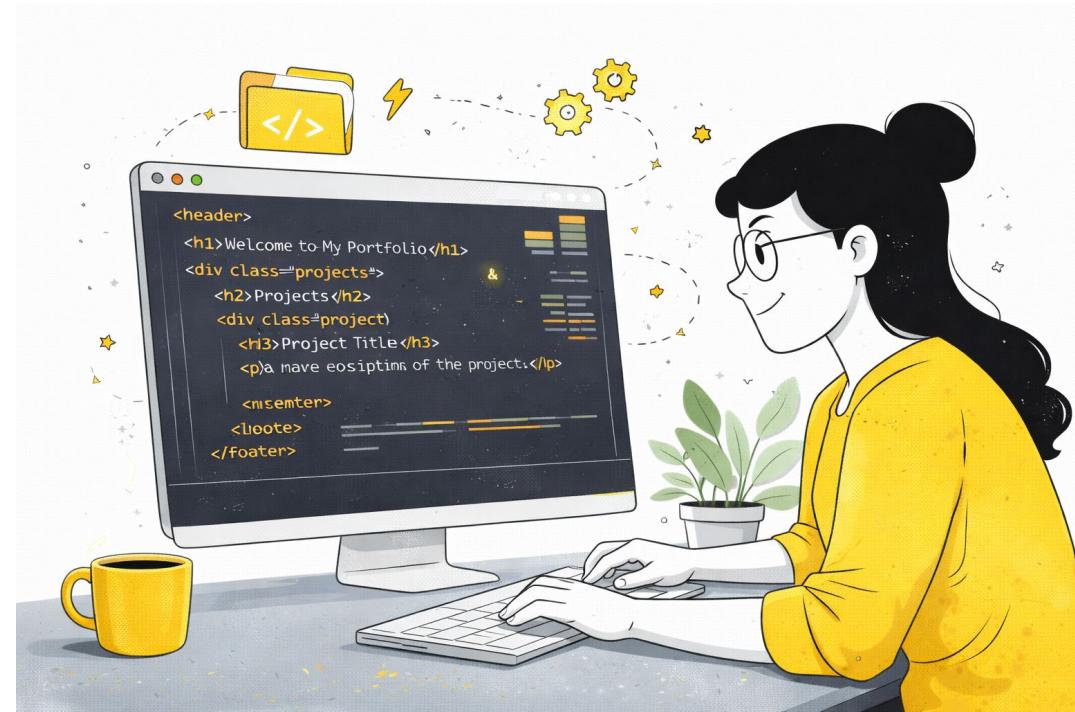


Lesson 04: Fast Local Development with VS Code

Start

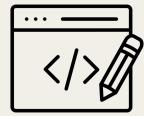
Since the workflow of working online is quite slow we are going to set up a local development environment to be able to develop and test fast before publishing



Learning Objectives



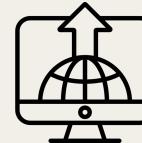
Set up a local development environment using VS Code



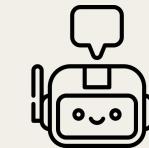
Edit website files locally and preview changes instantly



Use Git (via SourceTree) to commit and push changes



Publish updates safely to GitHub Pages



Use AI assistance inside the editor in a controlled and responsible way

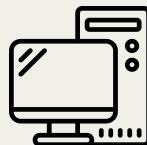


These objectives describe real development skills used in professional environments.

Deliverables



✓ A local copy of your website repository on your computer



✓ A working local preview of your website using Live Server



✓ At least one local modification tested safely



✓ At least one commit with a clear message



✓ A successfully published update on GitHub Pages



If you can modify your site locally, test it, and publish it safely, you have succeeded.





AI Learning Support for This Lesson

In this lesson, the AI tutor will support your local development workflow.

A guided prompt is available to help you understand and use professional tools. You can use it to help you:

- Understand the role of VS Code, Git, and GitHub Pages
- Clarify each step of the local development workflow
- Ask questions when something doesn't work as expected
- Make small, safe improvements to your code
- Review AI-generated suggestions before accepting them

 Use the AI to understand your workflow — always test locally before publishing. **Lesson Prompt**.



Why Develop Locally?

Editing directly on GitHub is slow and risky.

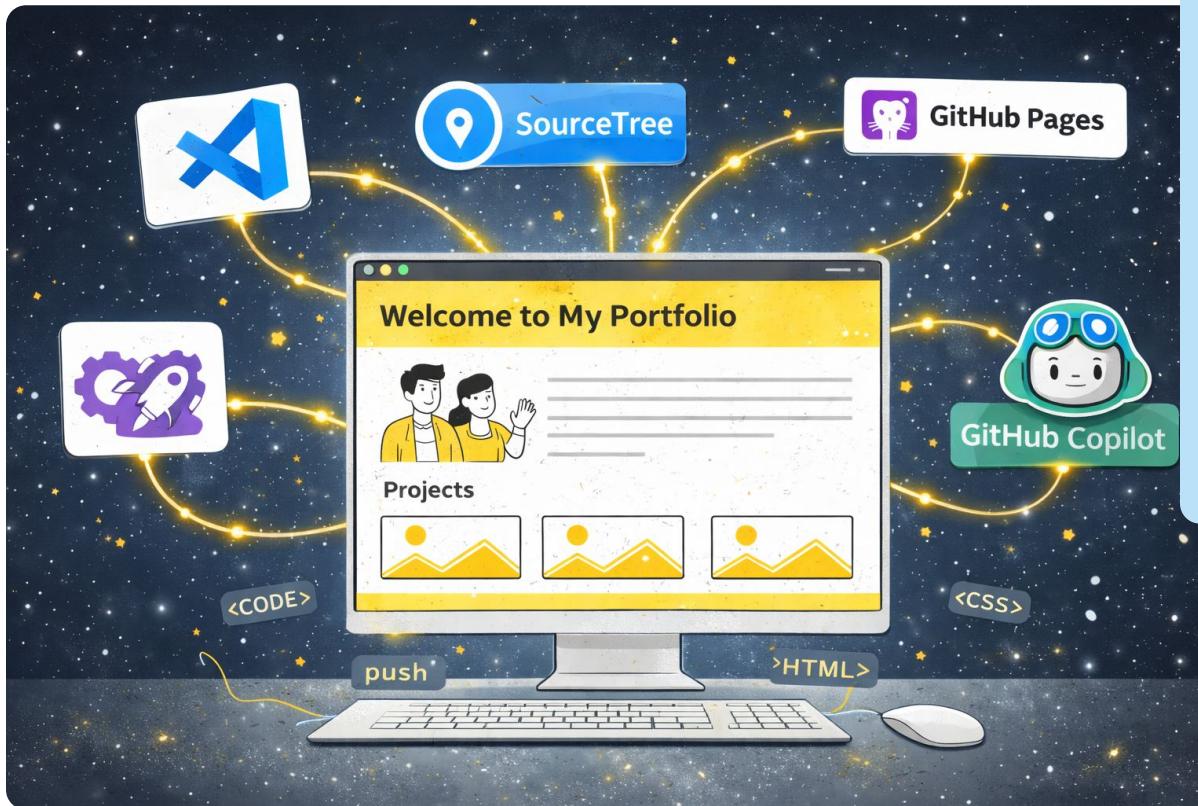
Local development allows you to:

- Work faster
- See changes instantly
- Experiment without breaking your live site
- Use AI tools inside your editor

💡 This is how professionals work — even for simple websites.

Next





Tools We Will Use

For this lesson we will use:

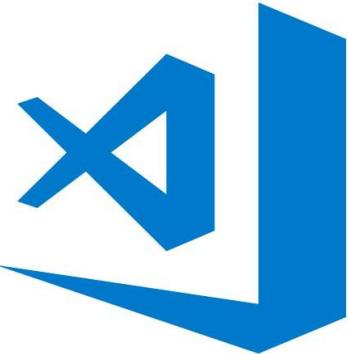
- **VS Code** → Code editor
- **SourceTree** → Git version control (visual)
- **Live Server** → Local web server
- **GitHub Pages** → Online publication
- **GitHub Copilot** → AI code assistant

 You don't need to master them — just understand their role.

Next



Download and Install VS Code



Visual Studio Code (VS Code) is a free code editor.
Steps:

1. Go to the official VS Code website
2. Download the version for your OS (Windows / macOS / Linux)
3. Install with default options

✓ VS Code will be your main working environment.

Download VS Code

A screenshot of the Visual Studio Code interface. The code editor shows a file named 'index.js' with the following content:

```
selection View ... ← → my-web-app
ts > ...
import express from 'express';
const app = express();
const port = process.env.PORT || 3000;
app.use(express.static('public'));
app.get('/', (req, res) => {
  res.sendFile("index.html", { root: 'public' });
});
app.listen(port, () => {
  console.log(`Server is running on port ${port}`);
});
```

The status bar at the bottom shows: Ln 14 Col 4 Spaces: 4 UTF-8 CR/LF () TypeScript.

VS Code allows you to:

- Open your website files
- Edit HTML, CSS and Javascript code
- Use extensions
- Preview changes
- Work with AI assistants

💡 Think of it as:
“A powerful text editor
designed for developers”



2R



X

```
ts server.ts > ...
1  import express from 'express';
2
3  const app = express();
4  const port = process.env.PORT || 3000;
5
6  app.use(express.static('public'));
7
8  app.get('/', (req, res) => {
9    res.sendFile('index.html', { root: 'public' });
10 }
11
12 app.listen(port, () => {
13   console.log(`Server is running on port ${port}`);
14 })
```



Simplicity and power in
a beautiful Git GUI

[Download for Windows](#)

Version Control (SourceTree)

& Windows

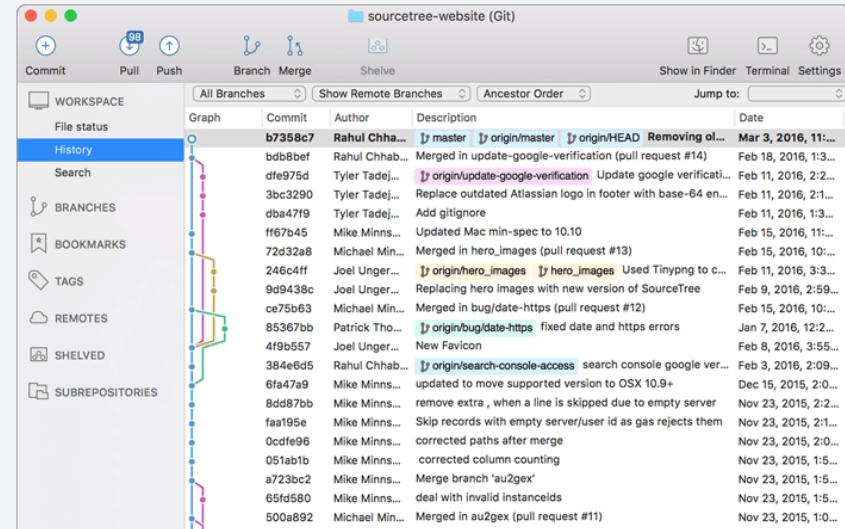
SourceTree is a **free visual Git client**.

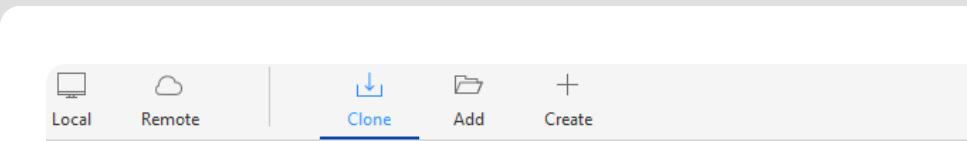
Why we use it:

- No command line required
- Easy to understand commits
- Safe interaction with GitHub

Steps:

1. Download SourceTree
2. Install it
3. Log in with your GitHub account

[Next](#)



Clone

Cloning is even easier if you set up a remote account

Source Path / URL: [Browse](#)
Repository Type: [?](#) No path / URL supplied

Destination Path: [Browse](#)

Name:

Local Folder: [Advanced Options](#)

[Clone](#)

Discussions Actions Projects Wiki Security Insights Settings

portofolio Public

main 1 Branch 0 Tags Go to file Add file Code

EstebanGameDevelopment Removed files

assets Progress done.

docs Removed files

README.md Initial commit

Clone HTTPS SSH GitHub CLI Copy URL to clipboard <https://github.com/arcadeatyourplace/portofolio>

Clone using the web URL.

Open with GitHub Desktop Download ZIP

last week

Clone Your GitHub Repository

Cloning means: “Create a local copy of your online repository”

Steps:

1. Open SourceTree
2. Click Clone
3. Paste your GitHub repository URL
4. Choose a local folder
5. Clone

Now your website exists on your computer.

Next



✓ pages build and deployment #11

Summary

All jobs

- ✓ build
- ✓ report-build-status
- ✓ deploy

Run details

Usage

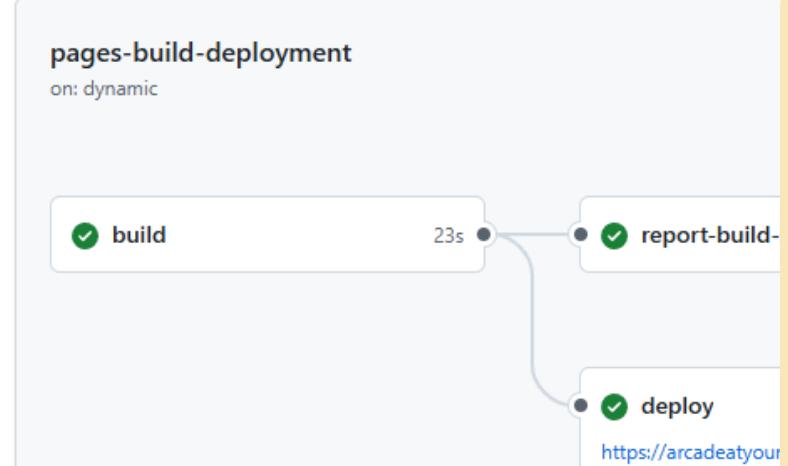
Triggered via dynamic last week

arcadeatyourplace -o ef95d19 main

Status: Success

Total duration: 48s

Artifacts: 1



Understanding the Workflow

From now on, your workflow will be:

1. Edit files locally
2. Preview changes locally
3. Commit changes
4. Push to GitHub
5. GitHub Pages updates automatically

Simple, safe, and fast.

Next





```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Esteban Gallardo García | Portfolio</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      margin: 0;
      background: #f5f5f5;
      color: #333;
    }

    .hero{
      min-height:320px;
      display:flex;
      align-items:center;
      justify-content:center;
      color:white;
      position:relative;
    }
  </style>

```

Open the Project in VS Code

Steps:

1. Open VS Code
2. Click Open Folder
3. Select the folder where you cloned the repository

This folder becomes your workspace.

👉 You should see files like:

- index.html
- style.css (if present)

Next



Install the Live Server Extension



Live Server

Ritwick Dey | 72,655,229 | ★★★★★ (512)

Launch a development local Server with live reload feature

[Disable](#) | [Uninstall](#) | Auto Update | 

[DETAILS](#) [FEATURES](#) [CHANGELOG](#)

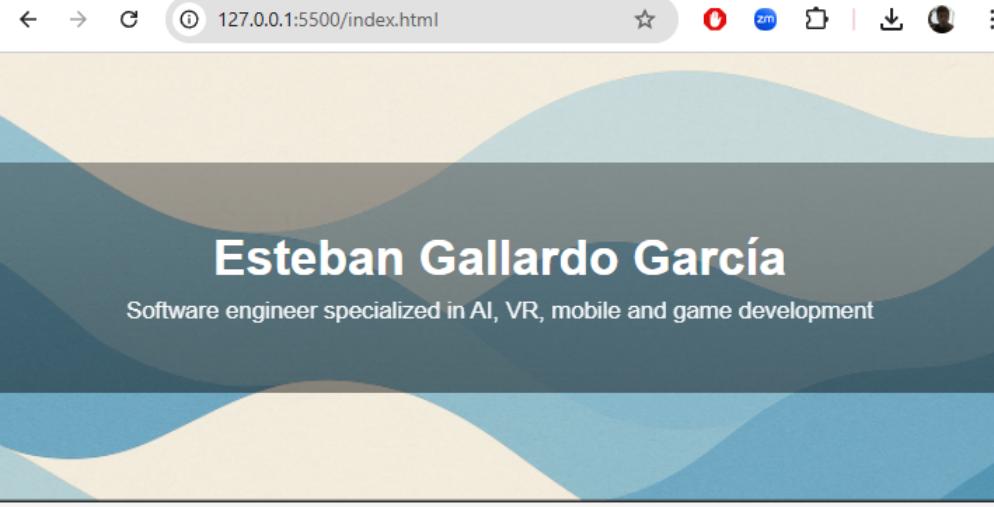
[Wanna try [LIVE SERVER++ \(BETA\)](#) ? It'll enable live changes without saving file. <https://ritwickdey.com/live-server-plus-plus>]

Live Server

Live Server allows you to:

- Open your website locally
- See changes instantly
- Avoid refreshing manually

[Steps](#)



Start the Live Server

Steps:

1. Open index.html
2. Right-click inside the file
3. Click Open with Live Server

[More](#)

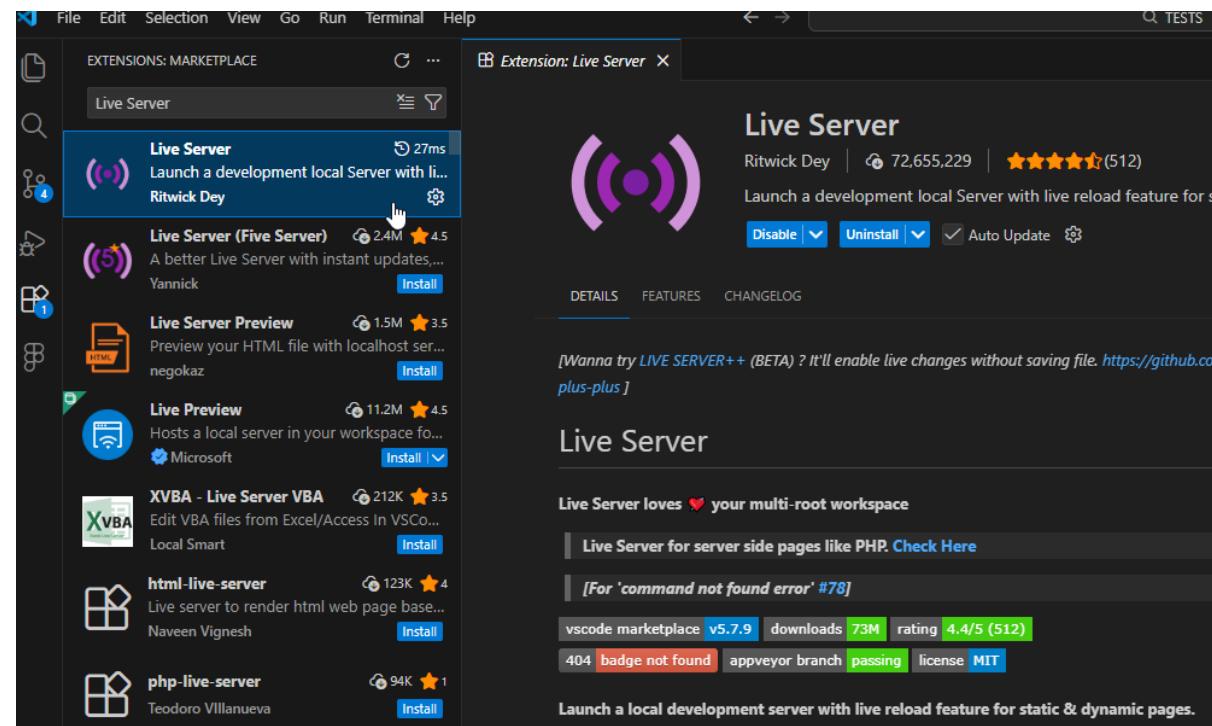


2C



Steps:

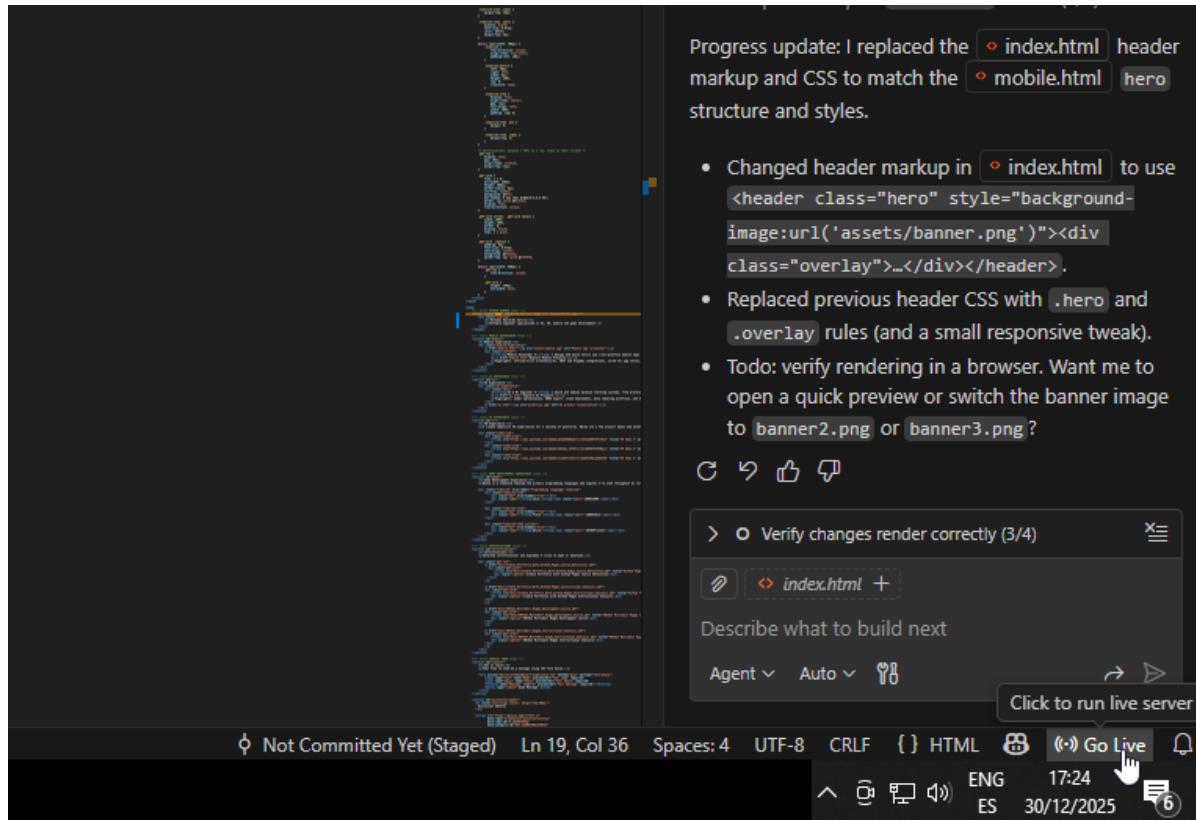
1. Open Extensions in VS Code
2. Search for Live Server
3. Install it





🌐 A browser window opens:

- This is your local website
- Running on your computer





```
index.html M X
index.html > body > header.hero > div.overlay > p
2
3
7
317 {  
320
321
322
```

Make Your First Local Change

Try a simple change:

- Modify a title
- Change a section name
- Add a short sentence
- Save the file.

• The browser updates automatically.

💡 This is real-time local development.

Next



Commit and visualize your changes in the website



2R



Use SourceTree to commit a change:

A commit means:

“Save a version of my changes”

Steps:

1. Open SourceTree
2. Review changed files
3. Write a short commit message
4. Click Commit
5. Push to GitHub



Check GitHub Pages

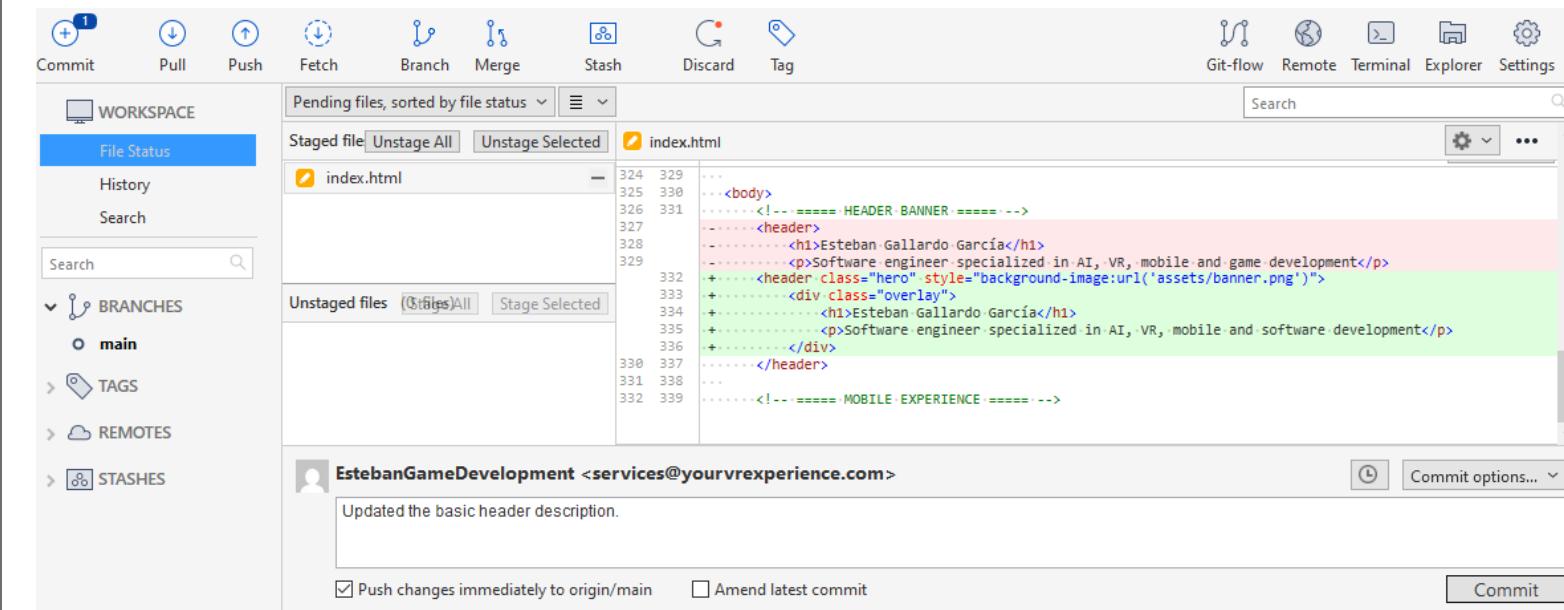
1. Wait until GitHub Actions has processed the changes
2. Open your GitHub Pages URL
3. Refresh the page
4. Verify your changes are online



You have successfully published a new version.

<

>



Commit Pending files, sorted by file status ☰

Staged file Unstage All Unstage Selected index.html Search

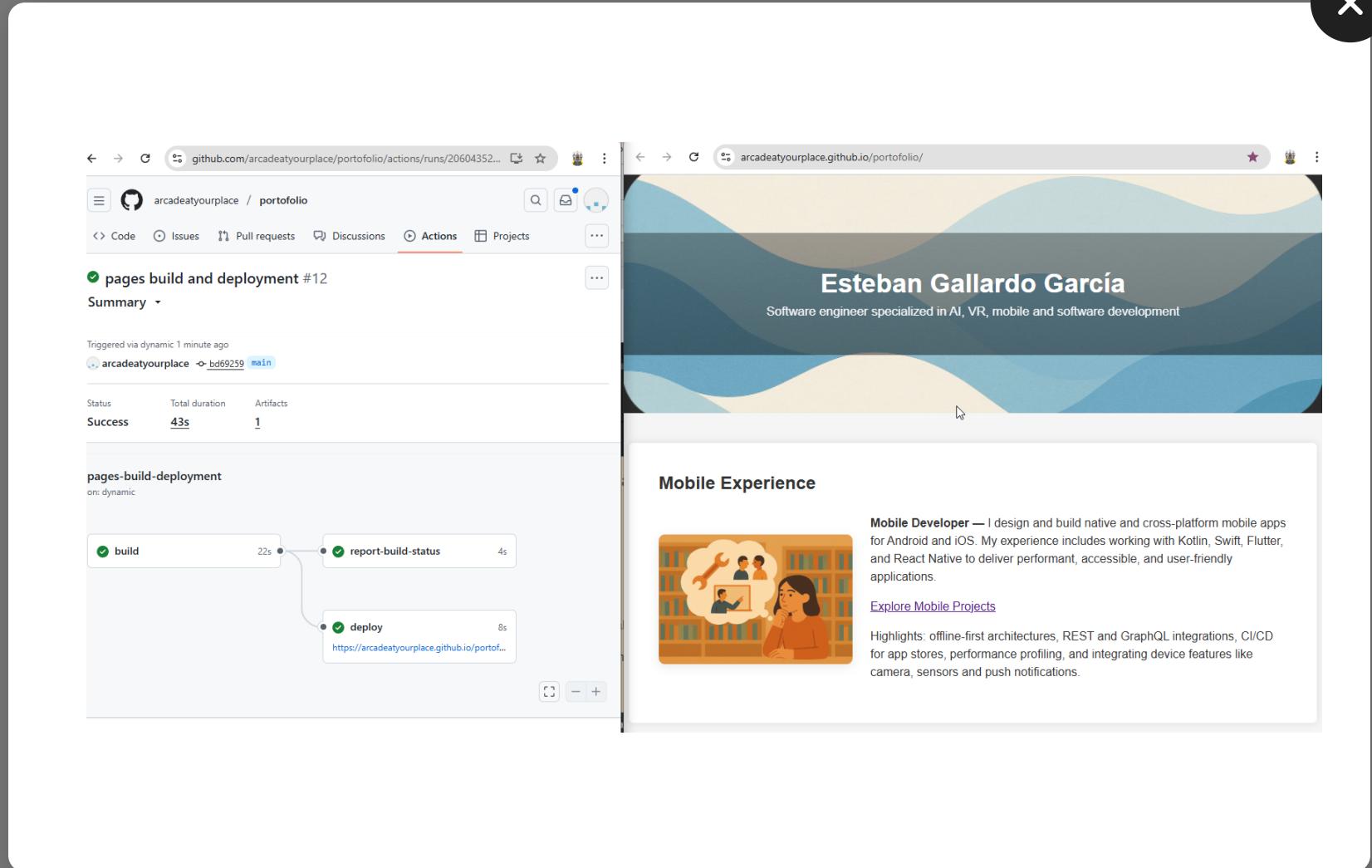
Unstaged files 0 files All Stage Selected

324 329 ...
325 330 ...<body>
326 331 ...<!-- ===== HEADER BANNER =====-->
327 ...<header>
328 ...<h1>Esteban Gallardo Garcia</h1>
329 ...<p>Software engineer specialized in AI, VR, mobile and game development</p>
330 332 ...<!-- ===== MOBILE EXPERIENCE =====-->
331 333 ...<header class="hero" style="background-image:url('assets/banner.png')">
332 334 ...<h1>Esteban Gallardo Garcia</h1>
333 335 ...<p>Software engineer specialized in AI, VR, mobile and software development</p>
336 337 ...<div class="overlay">
337 ...</div>
338 ...</header>
339 ...<!-- ===== MOBILE EXPERIENCE =====-->

EstebanGameDevelopment <services@yourvrexperience.com> Commit options...

Updated the basic header description.

Push changes immediately to origin/main Amend latest commit Commit



The image shows a browser window with two tabs. The left tab is a GitHub Actions run page for a portfolio, and the right tab is a custom portfolio website.

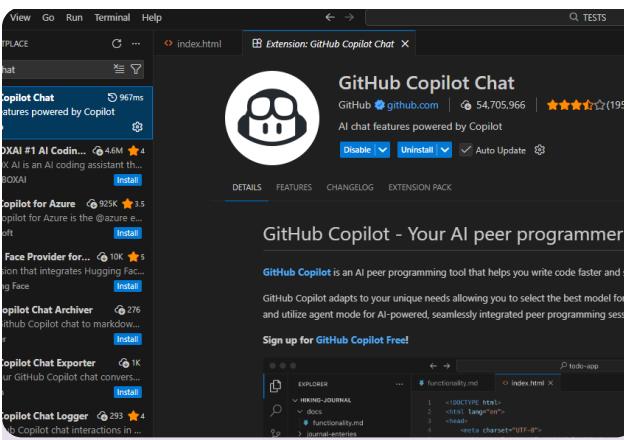
GitHub Actions Run Page (Left Tab):

- Page Title:** GitHub - arcadeatyourplace / portfolio - Actions
- Run Summary:** pages build and deployment #12
- Status:** Success (43s)
- Artifacts:** 1
- Workflow Diagram:** A CI/CD pipeline with three steps: build, report-build-status, and deploy. The build step took 22s, report-build-status took 4s, and deploy took 8s. The deploy step links to the portfolio website: <https://arcadeatyourplace.github.io/portfolio/>.

Portfolio Website (Right Tab):

- Page Title:** GitHub - arcadeatyourplace.github.io/portfolio/
- Header:** Esteban Gallardo García, Software engineer specialized in AI, VR, mobile and software development
- Section:** Mobile Experience
- Text:** Mobile Developer — I design and build native and cross-platform mobile apps for Android and iOS. My experience includes working with Kotlin, Swift, Flutter, and React Native to deliver performant, accessible, and user-friendly applications.
- Link:** [Explore Mobile Projects](#)
- Text (Highlights):** Highlights: offline-first architectures, REST and GraphQL integrations, CI/CD for app stores, performance profiling, and integrating device features like camera, sensors and push notifications.

Using GitHub Copilot (Part 1/2)



Installing GitHub Copilot

GitHub Copilot is an AI assistant inside VS Code.

Steps

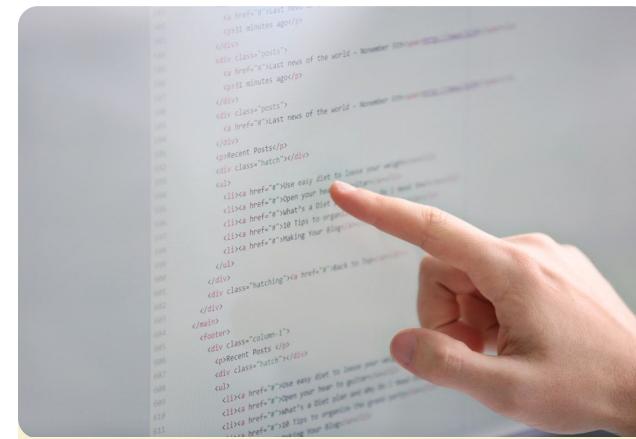
A screenshot of VS Code showing GitHub Copilot generating code for a mobile experience section. The code includes a header banner with a background image of a person, a mobile experience section with a mobile phone icon, and an AI experience section. The AI is prompted to create a structure with an image on the right and text on the left introducing mobile development.

Asking Copilot for a change

Example of prompt request:

“For the section ‘Mobile Experience’, create a structure with an image on the right and a text on the left introducing my experience in mobile development.”

Copilot Actions



Review, Don’t Blind Copy

Important rule:

- Read what Copilot generates
- Understand the structure
- Ask follow-up questions if needed

🔔 You are still in control — AI is your assistant.

3C



<

>



Copilot will:

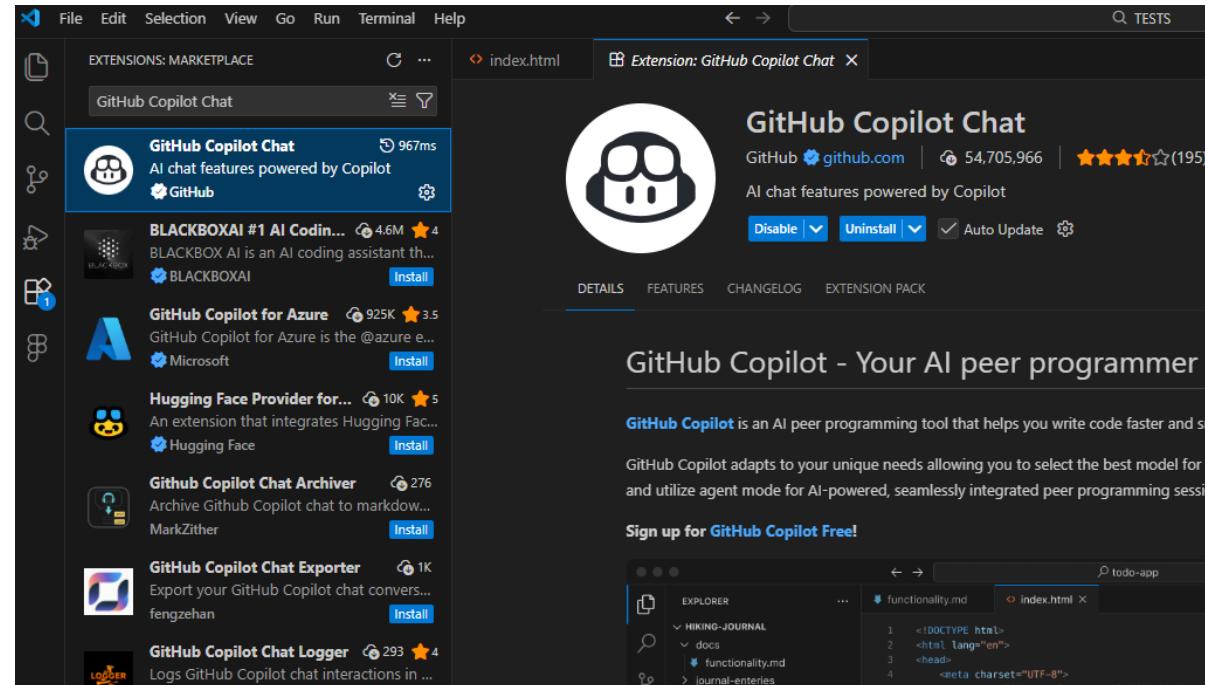
- Suggest HTML structure
- Possibly suggest CSS
- Explain changes

```
66 }  
67 }  
68 footer {  
69   text-align: center;  
70   padding: 20px;  
71   color: #666;  
72   font-size: 0.9rem;  
73 }  
74 /* Mobile Experience layout: image left, text right */  
75 /* Mobile Experience layout: image right, text left */  
76 .mobile-experience {  
77   display: flex;  
78   gap: 24px;  
79   align-items: center;  
80   flex-direction: row-reverse;  
81 }  
82 .mobile-experience img {  
83   width: 260px;  
84   height: auto;  
85   object-fit: cover;  
86   border-radius: 8px;  
87   flex-shrink: 0;  
88   box-shadow: 0 4px 14px rgba(0,0,0,0.08);  
89 }  
90 .mobile-experience .content {  
91   flex: 1;  
92   text-align: left;  
93 }  
94 .mobile-experience .content p {  
95   margin-top: 8px;  
96   line-height: 1.5;  
97 }  
98 @media (max-width: 700px) {  
99 }  
100 }
```

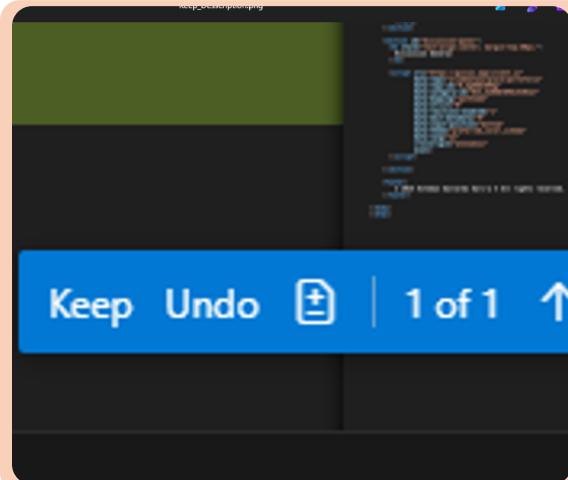
Steps:

1. Open Extensions
2. Search GitHub Copilot Chat
3. Install
4. Log in with GitHub

 Copilot helps you write and modify code using natural language.



Using GitHub Copilot (Part 2/2)



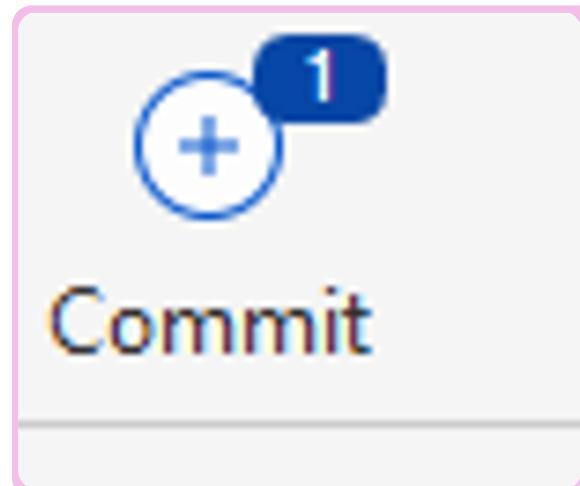
Press **keep** to confirm the changes.

After accepting Copilot's changes:

1. Save files
2. Check the browser (Live Server)
3. Verify layout and content

➡ If something looks wrong:

- Undo
- Ask Copilot again
- Adjust manually



Commit and public the AI Change

Once satisfied:

1. Commit changes in SourceTree
2. Push to GitHub
3. Open GitHub Pages
4. Verify the final result

✓ AI → Local → Commit
→ Live



2R



```
        </div>
        </a>
    </div>
</section>

<!-- ===== LOCATION BASED EXPERIENCES ===== -->
<section id="location-based">
    <h2>Location Based Experiences</h2>
    <p>I have developed location based VR experiences that had been enjoyed by thousands of people.</p>

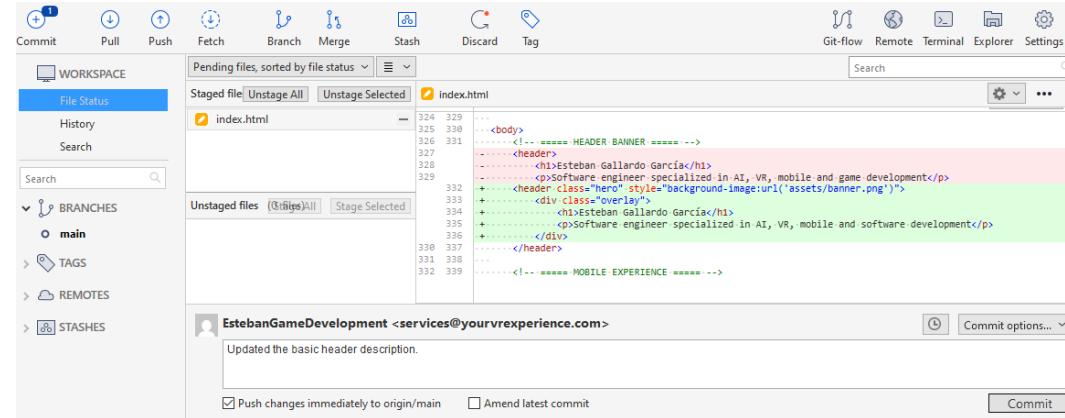
    <div class="video-row">
        <div class="video-wrap">
            <iframe src="https://www.youtube.com/embed/qG3m40VB6eA?si=3E2byKOEYYFvhHnX" title="Location Demo 1" allowfullscreen allow="accelerometer gyroscope" data-videoid="qG3m40VB6eA" data-index="0" data-parent="location-based"></iframe>
        </div>
        <div class="video-wrap">
            <iframe src="https://www.youtube.com/embed/6Kb3qo_IAYU?si=yoLW60ATHJ94Mgly" title="Location Demo 2" allowfullscreen allow="accelerometer gyroscope" data-videoid="6Kb3qo_IAYU" data-index="1" data-parent="location-based"></iframe>
        </div>
        <div class="video-wrap">
            <iframe src="https://www.youtube.com/embed/oLj5mftsEZw?si=qKpPsGOpipmKhkAE" title="Location Demo 3" allowfullscreen allow="accelerometer gyroscope" data-videoid="oLj5mftsEZw" data-index="2" data-parent="location-based"></iframe>
        </div>
    </div>
</section>

<!-- ===== CONTACT FORM ===== -->
<section id="contact">
    <h2>Get In Touch</h2>
```

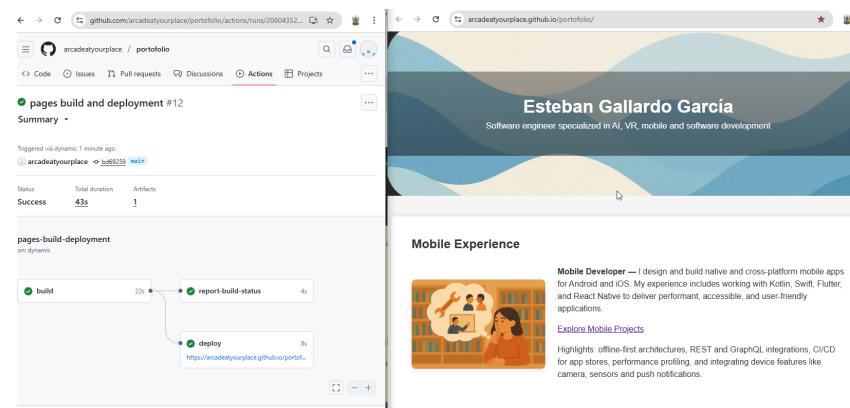
Keep Undo  | 1 of 1  



Commit & Push:



Git Actions and check website





Working with Multimedia Content

A real portfolio includes:

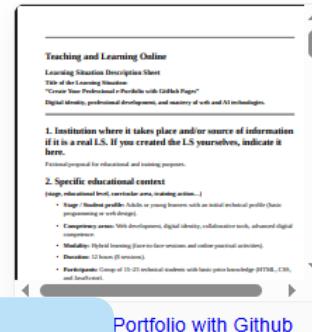
- Images
- Documents (PDFs)
- Videos
- Audio (optional)

To keep things clean and professional, we organize files properly.

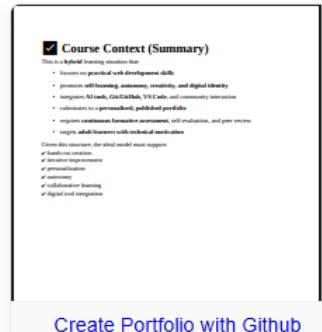
 Rule: **Structure first, content second.**

Next

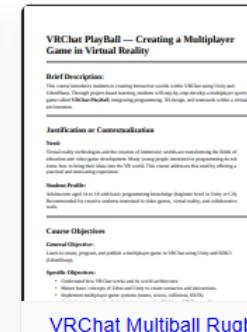
Selected certifications and diplomas — click to open or download.



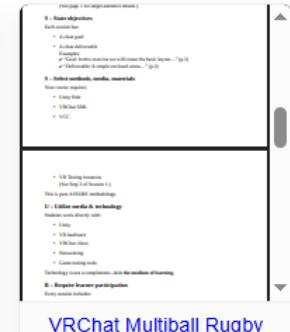
[Portfolio with Github Pages Instructional Analysis](#)



[Create Portfolio with Github Pages Instructional Analysis](#)



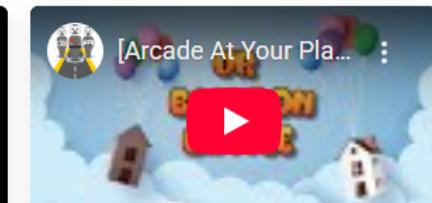
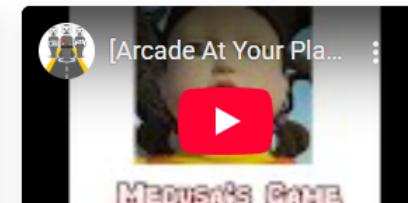
[VRChat Multiball Rugby Development Course](#)



[VRChat Multiball Rugby Instructional Analysis](#)

on Based Experiences

Developed location based VR experiences that had been enjoyed by thousands of people.





Organizing Files in VS Code

Create the following folders:

- /assets/ → images, videos, audio
- /docs/ → PDF documents

⌚ This mirrors professional website structures.

Add content

- Upload images into /assets
- Upload PDFs into /docs
- (Optional) videos or audio into /assets

🧠 These files will be referenced by HTML, not embedded directly.

Using an uploaded image

Use any uploaded image in a section





Goal:

- Replace placeholder image with the path to your image
 - ``
- Check the result in your Live Server



 You are now connecting: **File system → HTML → Browser**

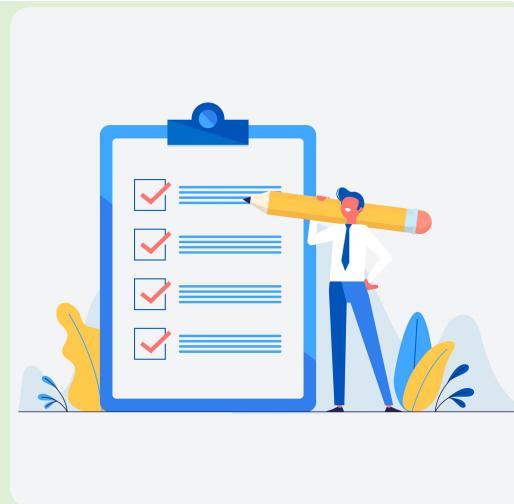
```
<!-- ===== MOBILE EXPERIENCE ===== -->
<section id="mobile">
  <h2>Mobile Experience</h2>
  <div class="m" Follow link (ctrl + click)
    <a href="mobile.html"></a>
    <div class="content">
      <p><strong>Mobile Developer -</strong> I design and build native and cross-platform mobile applications using React Native and Flutter.
      <p><a href="mobile.html">Explore Mobile Projects</a></p>
      <p>Highlights: offline-first architectures, REST and GraphQL integrations, CI/CD pipelines, and deep linking.
    </div>
  </div>
</section>
```

Completing Experience Sections with Copilot

Complete the main areas of experience using AI prompts.

Rule:

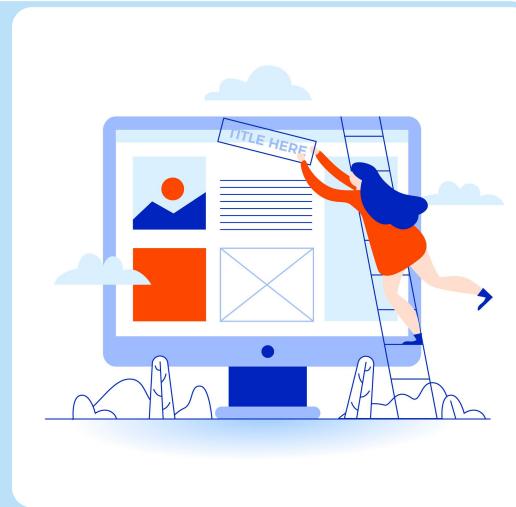
- One section at a time
- One clear intention per prompt



AI Experience Section (Image + Text)

Prompt example:
“For the section ‘AI Experience’, align the text on the left and an image on the right.”

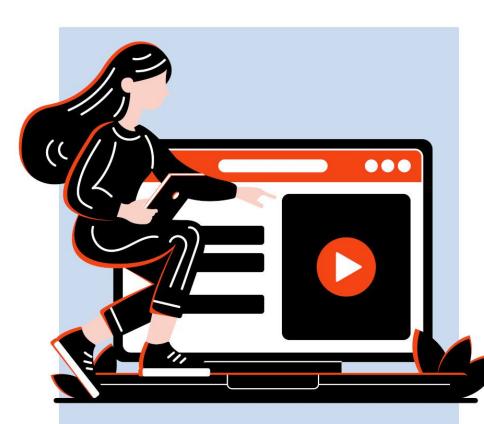
[More](#)



VR Experience Section (Embedded Video)

Prompt example:
“For the section ‘VR Experience’, embed 3 YouTube videos in a row.”

[More](#)



Game Development Timeline (Graphic Creation)

Prompt example:
“For the section ‘Game Development Experience’, create a horizontal timeline graphic showing: Java (2000–2008), Flash (2006–2012), Unity (2010–Nowadays).”

[+info](#)



4





Consectetur adipiscing elit

Consectetur adipiscing elit

Lorem ipsum dolor sit amet, consectetur adipiscing
 elit, sed **do eiusmod tempor** incididunt ut labore et
 dolore magna aliqua.

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod.

- **Lorem ipsum** dolor sit amet.
- Consectetur **adipiscing** elit.
- Sed **do eiusmod** tempor incididunt ut.

Lorem ipsum dolor sit

Modifying main layout



2R



We are going to modify the main layout by adding a **new section**: "Certifications"

Prompt example:

"Create a new section after 'Game Development Experience' called 'Certifications'. In this section, embed 4 PDF documents in a row that I will later upload into the docs folder."

Copilot should:

- Add a new section
- Place it in correct order
- PDF previews or links
- Horizontal layout
- Clean presentation

PDFs stay in /docs



Final steps:

1. Commit changes in SourceTree
2. Push to GitHub
3. Open GitHub Pages
4. Verify everything online

🎉 Your portfolio now contains real multimedia content.





Game Development Experience

Below is a timeline showing the primary programming languages and engines I've used throughout my career.



Certifications

Selected certifications and diplomas — click to open or download.

Teaching and Learning Online
Learning Statement Description Sheet
Type of Learning Resource
"Create Your Professional Portfolio with Github Pages"
Digital Assets, professional development, and mastery of tools and AI technologies.

1. Institution where it takes place and/or source of information
if it is a real LS, if you created the LS yourselves, indicate it here
[Redacted]
[Redacted]

2. Specific educational context
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]

[Create Portfolio with Github Pages Course Definition](#)

Course Context (Summary)
Brief Description:
This course provides a learning resource guide for creating a professional portfolio using GitHub Pages. Through various learning modules, students will learn the skills required to build a portfolio, including basic HTML, CSS, and GitHub knowledge.

Justification or Commendation
[Redacted]

Student Profile
[Redacted]

Course Objectives
[Redacted]

Specific Objectives
[Redacted]

[Create Portfolio with Github Pages Instructional Analysis](#)

VRChat PlayBall — Creating a Multiplayer Game in Virtual Reality
Brief Description:
This course provides a learning resource guide for creating a VR game using Unity and VRChat. Through various learning modules, students will learn the skills required to build a VR game, including basic Unity, VRChat, and VR technologies.

Justification or Commendation
[Redacted]

Student Profile
[Redacted]

Course Objectives
[Redacted]

Specific Objectives
[Redacted]

[VRChat PlayBall — Creating a Multiplayer Game in Virtual Reality](#)

VRChat Multiball Rugby Development Course
Brief Description:
This course provides a learning resource guide for creating a VR game using Unity and VRChat. Through various learning modules, students will learn the skills required to build a VR game, including basic Unity, VRChat, and VR technologies.

Justification or Commendation
[Redacted]

Student Profile
[Redacted]

Course Objectives
[Redacted]

Specific Objectives
[Redacted]

[VRChat Multiball Rugby Development Course](#)

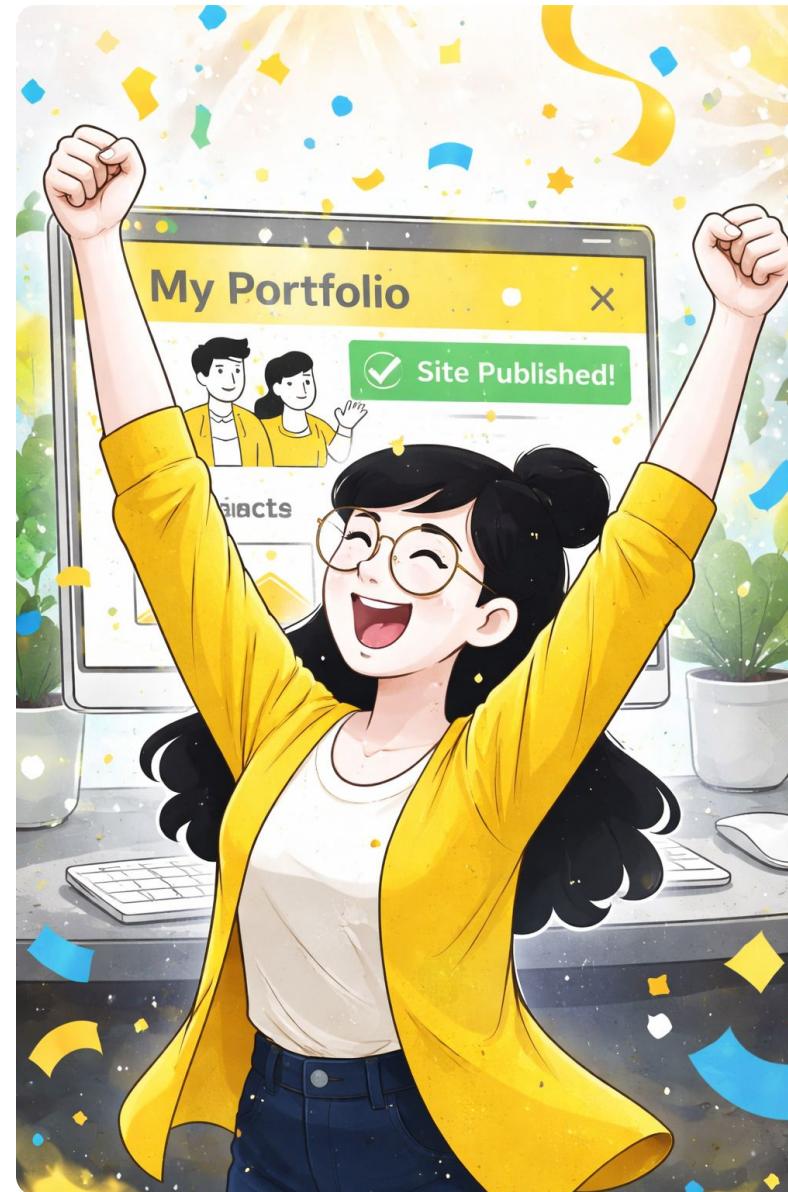
What You've Learned

By the end of this lesson, you can:

- Work locally with VS Code
- Preview websites instantly
- Use Git safely with SourceTree
- Organize assets professionally
- Connect files to HTML
- Embed images, videos, and PDFs
- Use AI to assist real development
- Publish with confidence
- Work like a real web developer

➤ You are no longer “just generating code”—you are building a website.

Next



Knowledge Test Questions



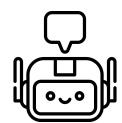
Purpose of Local Development

[Question](#)

Role of Live Server

[Question](#)

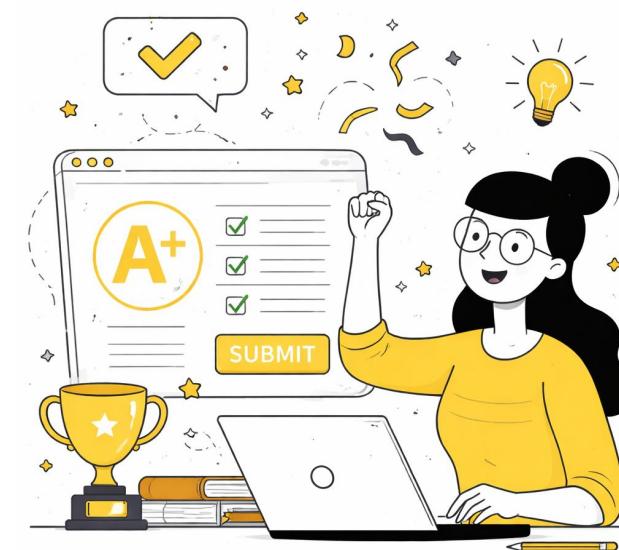
Understanding the Workflow

[Question](#)

Role of AI in Local Development

[Question](#)

Fast Local Development with VS Code





Why is local development preferred over editing files directly on GitHub?

Because local development allows safe experimentation and instant preview

Because GitHub does not support HTML editing

Because local files are published automatically without commits



What is the recommended way to use AI tools (like Copilot) during local development?

Use AI only after the website is published

Accept all AI-generated code without reviewing it

Use AI to assist with small changes, review the code, and test locally before publishing



What is the main purpose of the Live Server extension in VS Code?

To publish the website directly to GitHub Pages

To preview the website locally and update it automatically when files change

To manage Git commits and branches



Which sequence correctly represents the professional workflow introduced in this lesson?

Test → Edit → Publish

Edit locally → Preview
locally → Commit → Push
→ Publish

Edit online → Publish →
Test

Help us to improve

With your feedback we will keep improving for you to get the best results



Which part of setting up or using the tools (VS Code, SourceTree, Live Server, GitHub) was the most difficult for you, and why?

Write your answer here.

Send

After this lesson, how clear is the local development workflow for you?

Write your answer here.

Send

What change would most improve this lesson for future students?

Write your answer here.

Send

