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

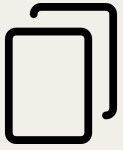
Use Git (via SourceTree) to commit and push changes

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

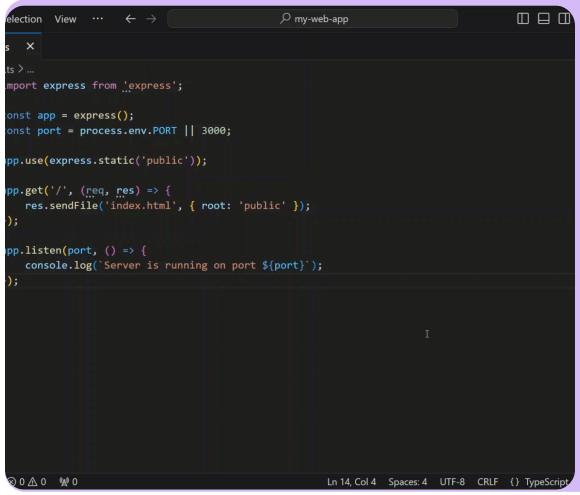
Visual Studio Code

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.

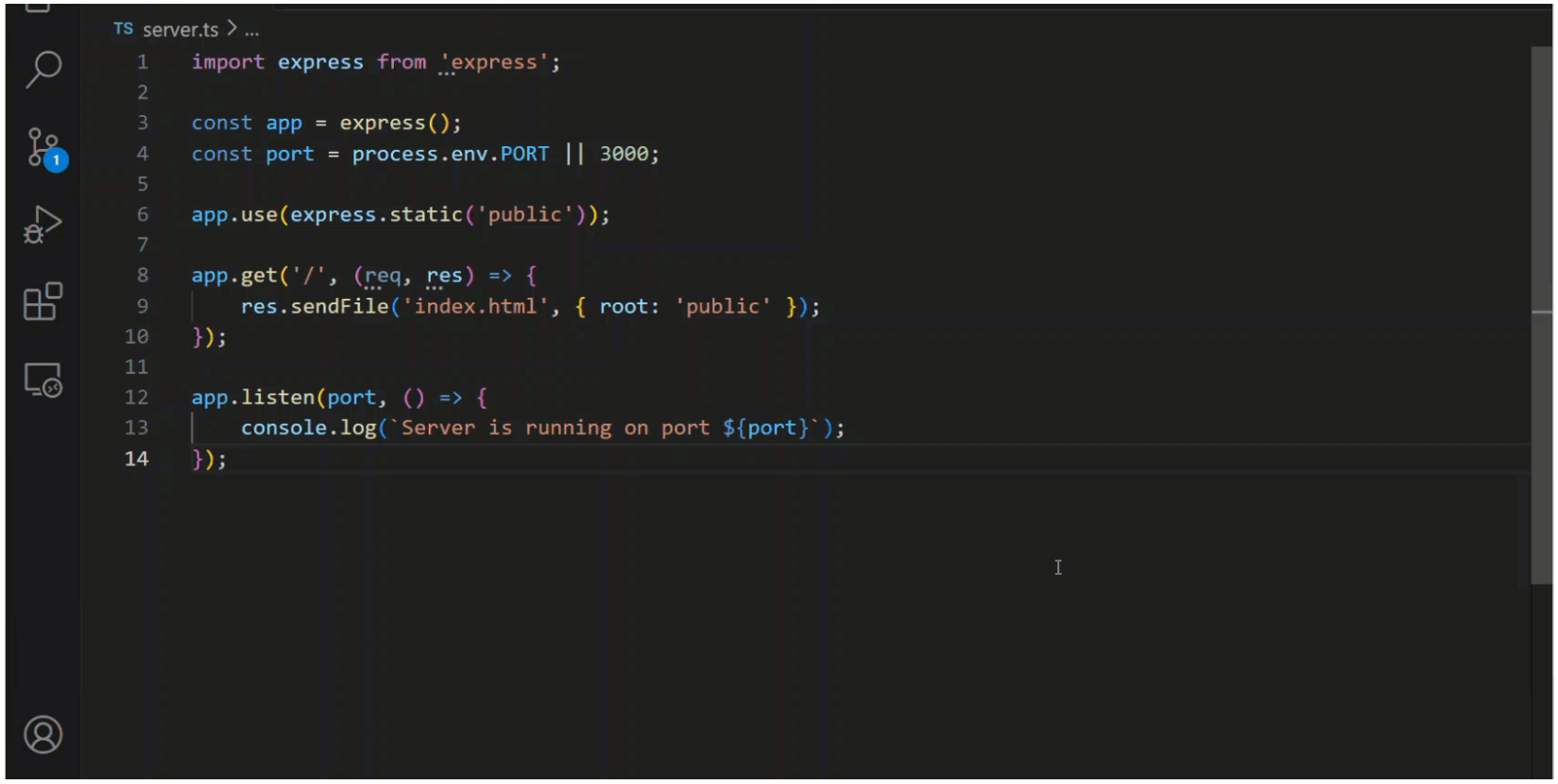
Download VS Code

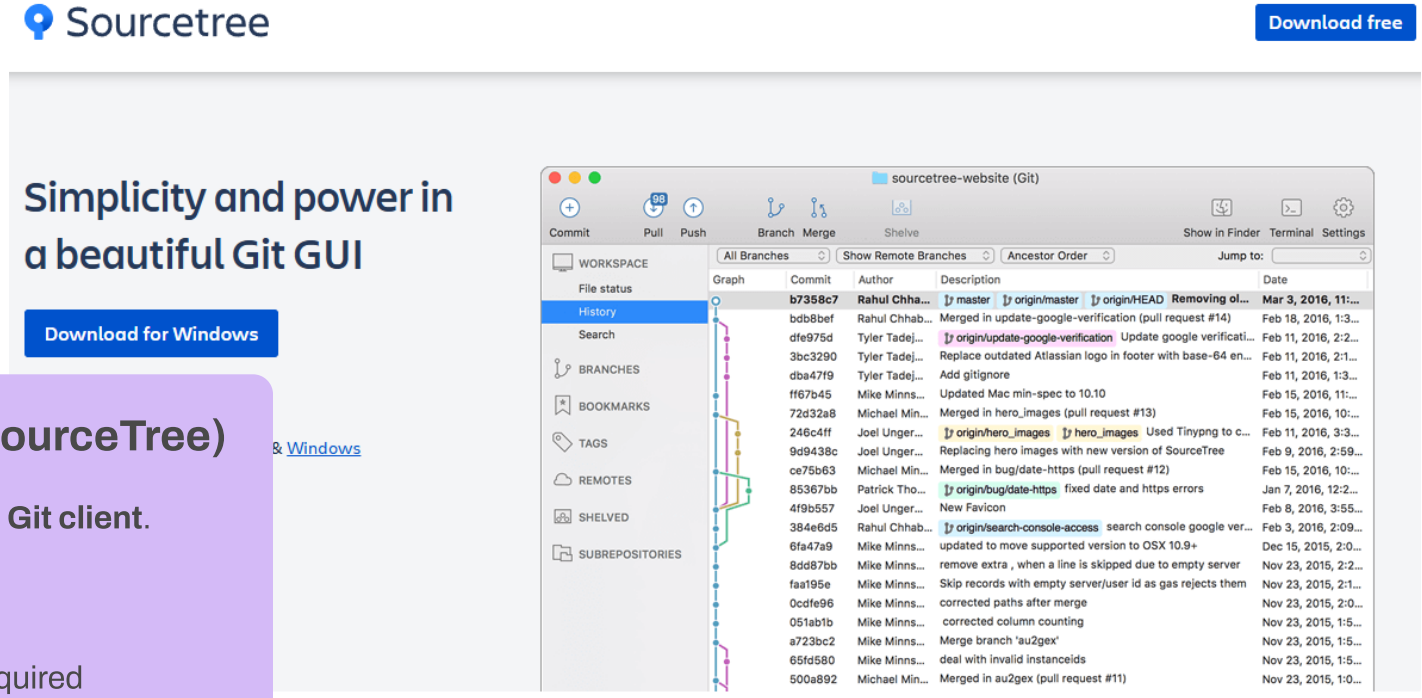


VS Code allows you to:

- 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”


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 });



Version Control (SourceTree)

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

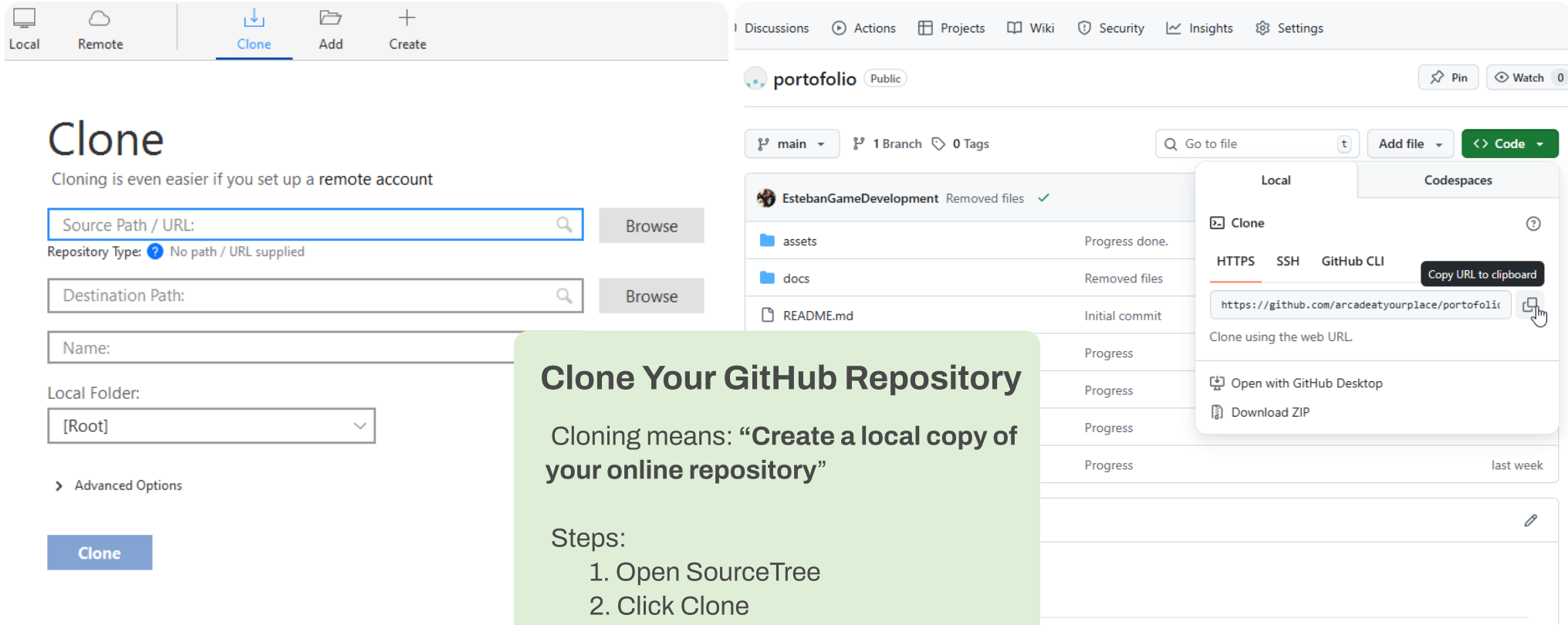
Why we use it:

- 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 Your GitHub Repository

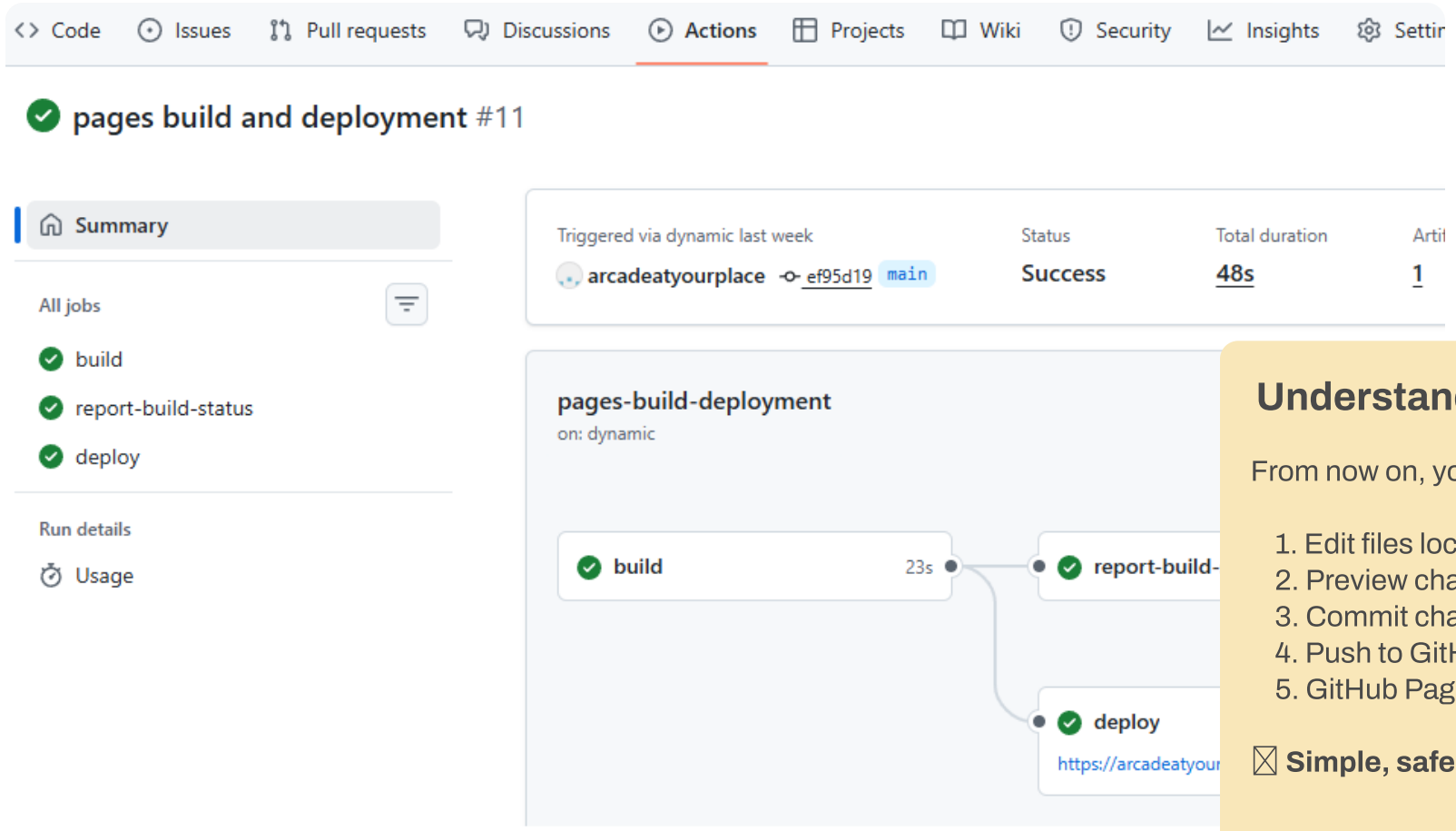
Cloning means: **“Create a local copy of your online repository”**

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



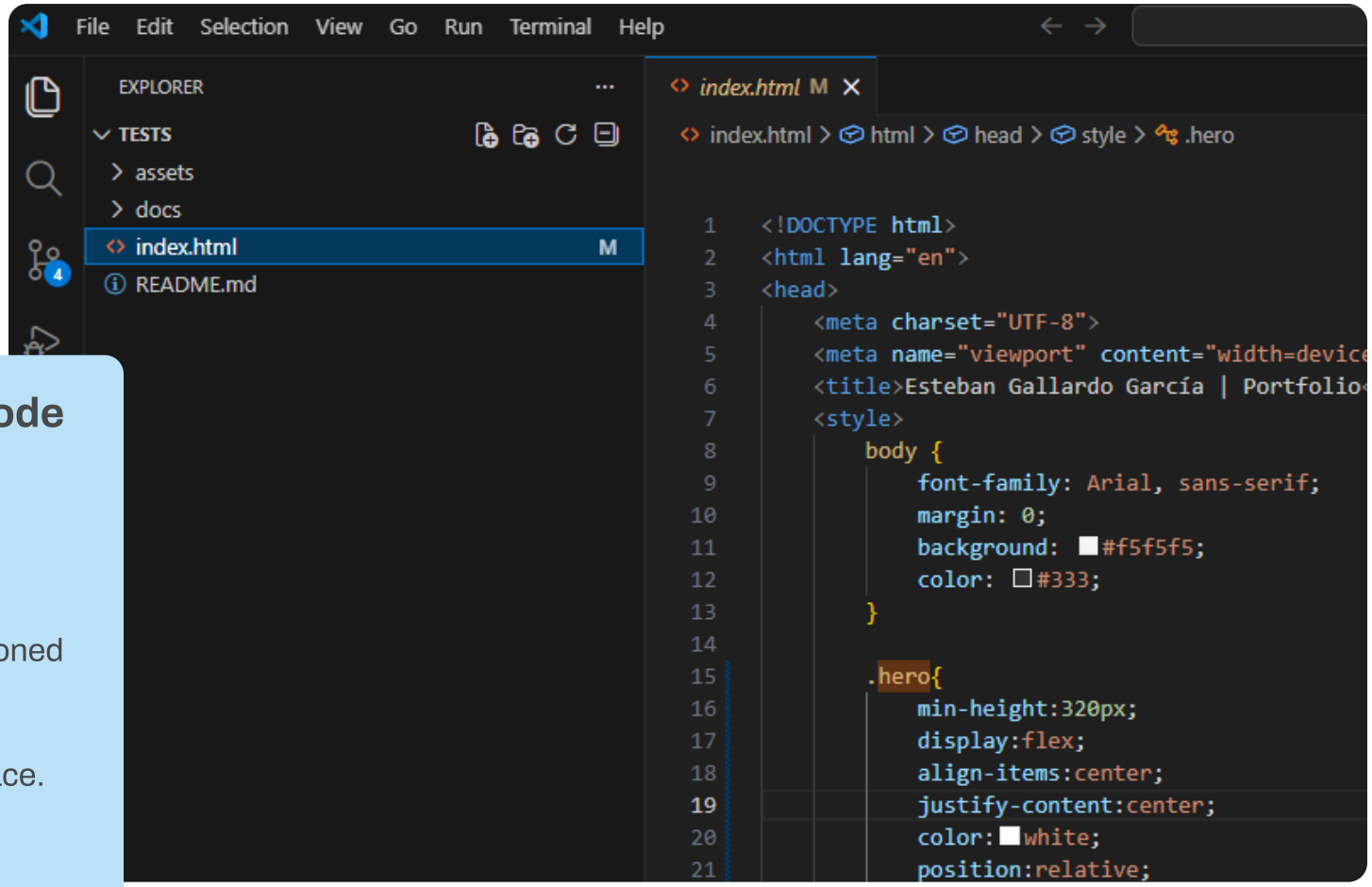
Understanding the Workflow

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



Open the Project in VS Code

Steps:

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

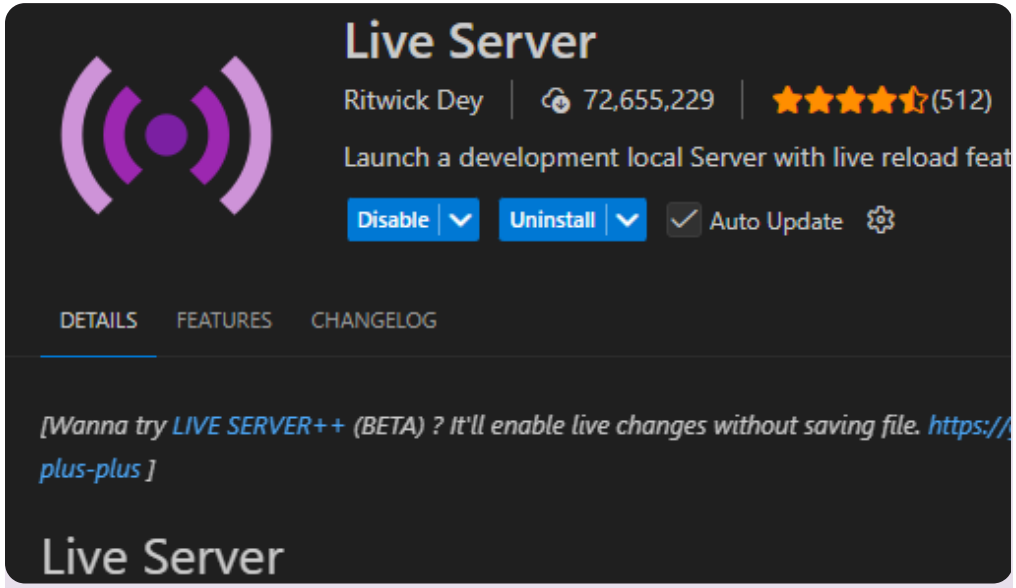
This folder becomes your workspace.

You should see files like:

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

Next

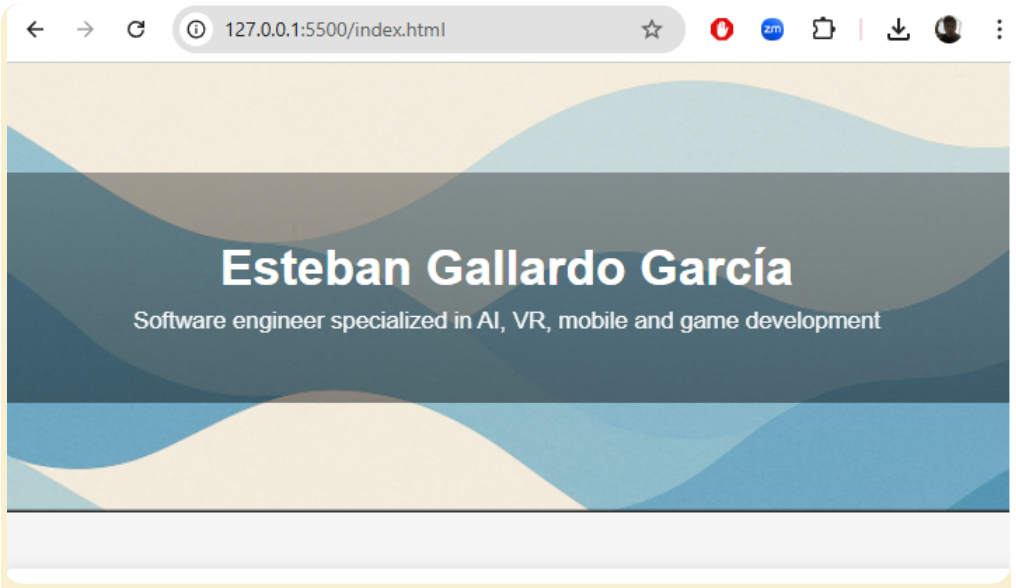
Install the Live Server Extension



Live Server allows you to:

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

Steps



Start the Live Server

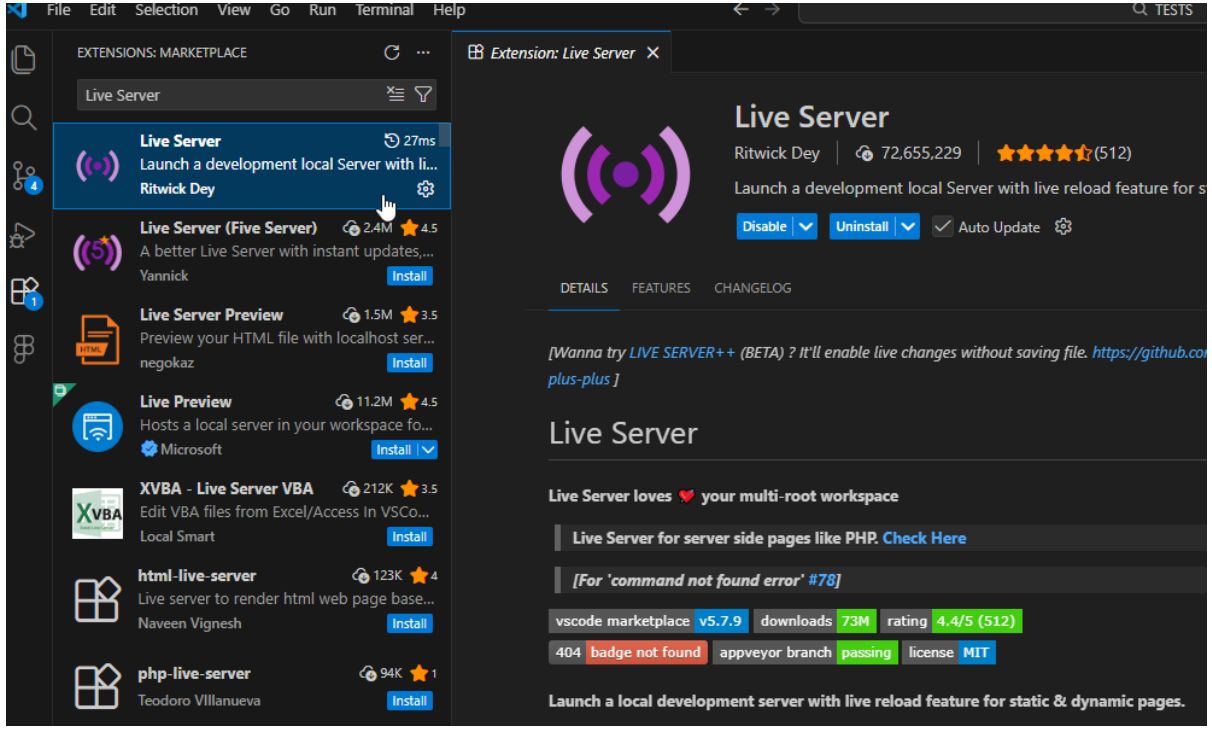
Steps:

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

More

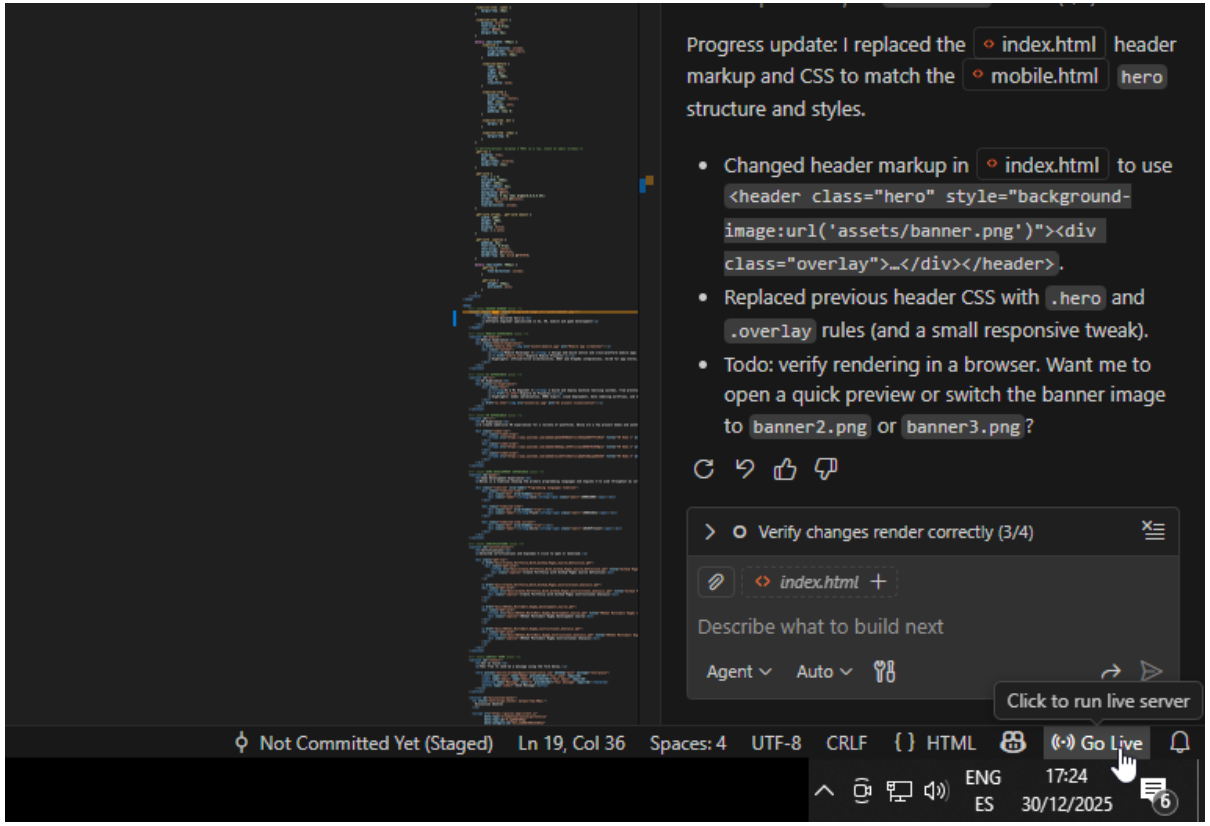
Steps:

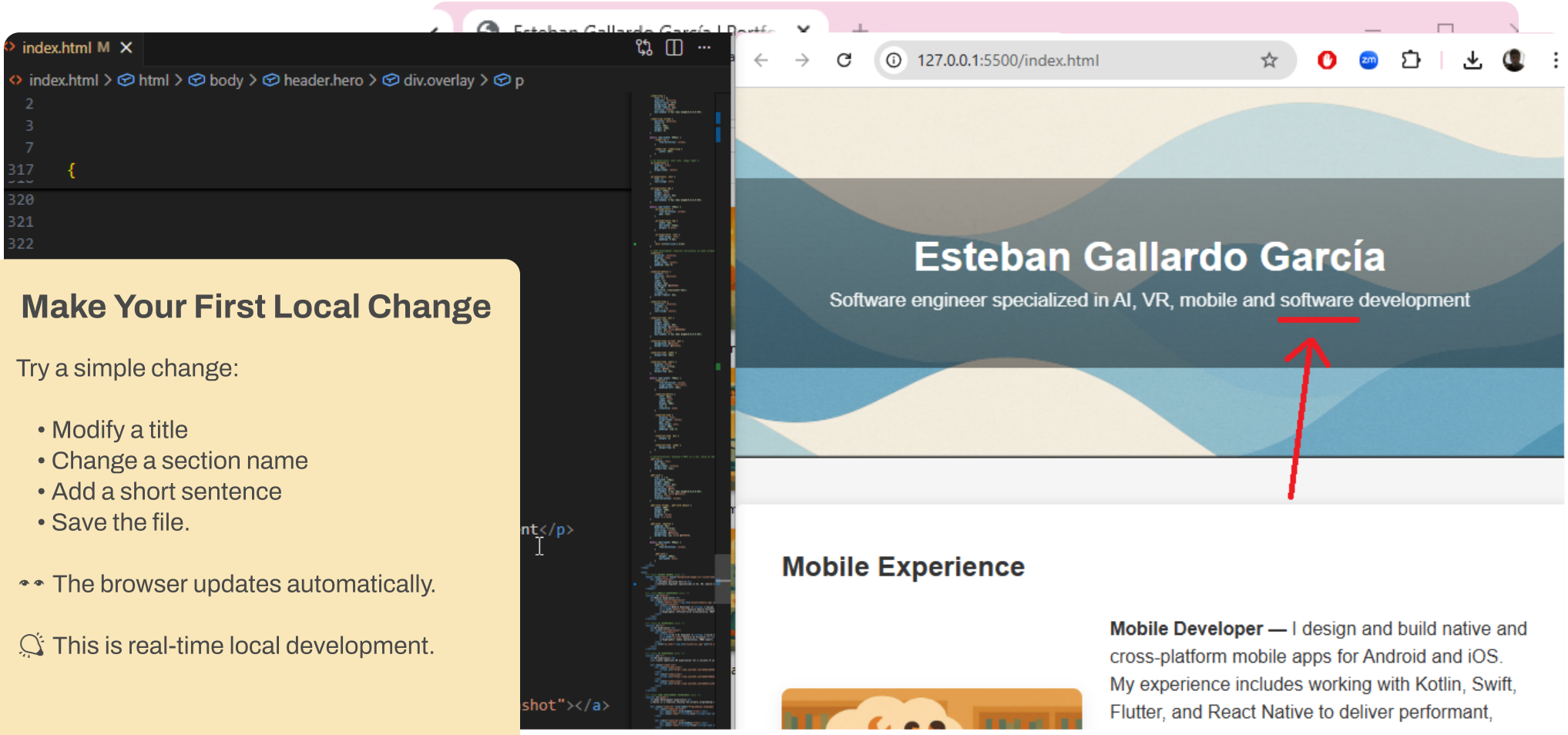
1. Open Extensions in VS Code
2. Search for Live Server
3. Install it



🌐 A browser window opens:

- This is your local website
- Running on your computer





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

Use SourceTree to commit a change:

A commit means:
“Save a version of my changes”

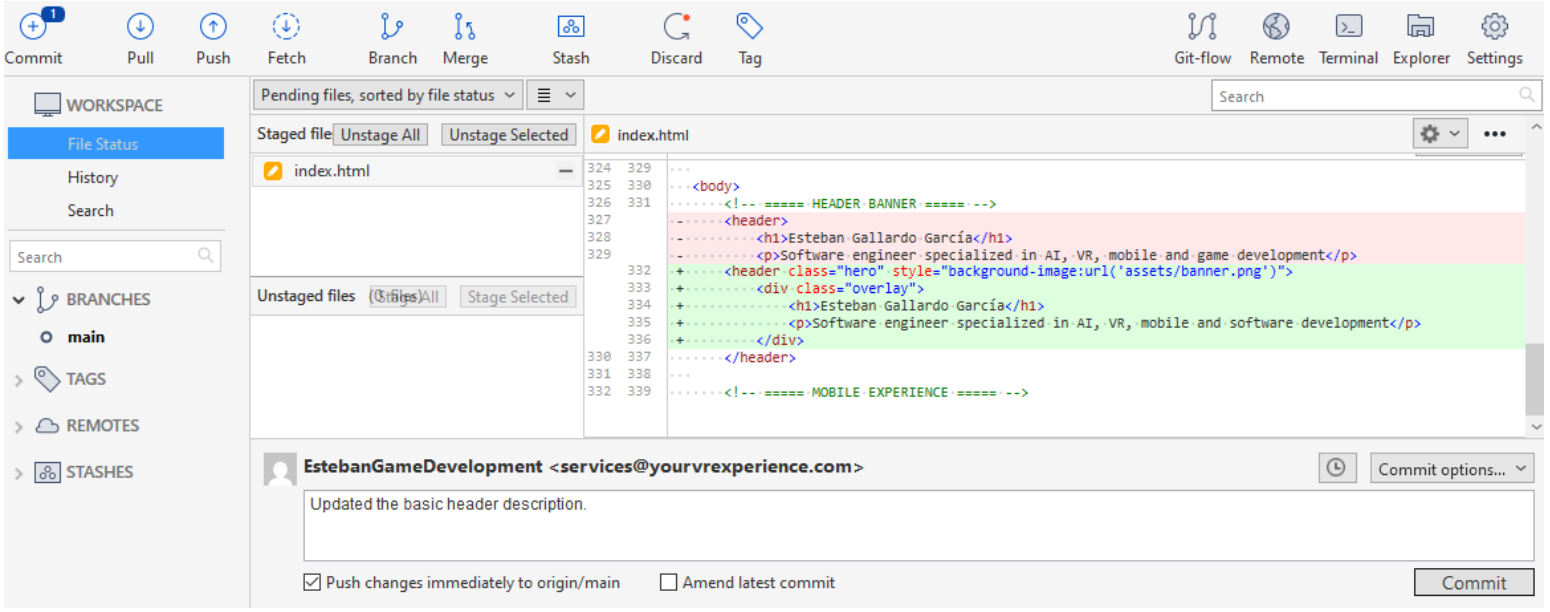
Steps:

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

Check GitHub Pages

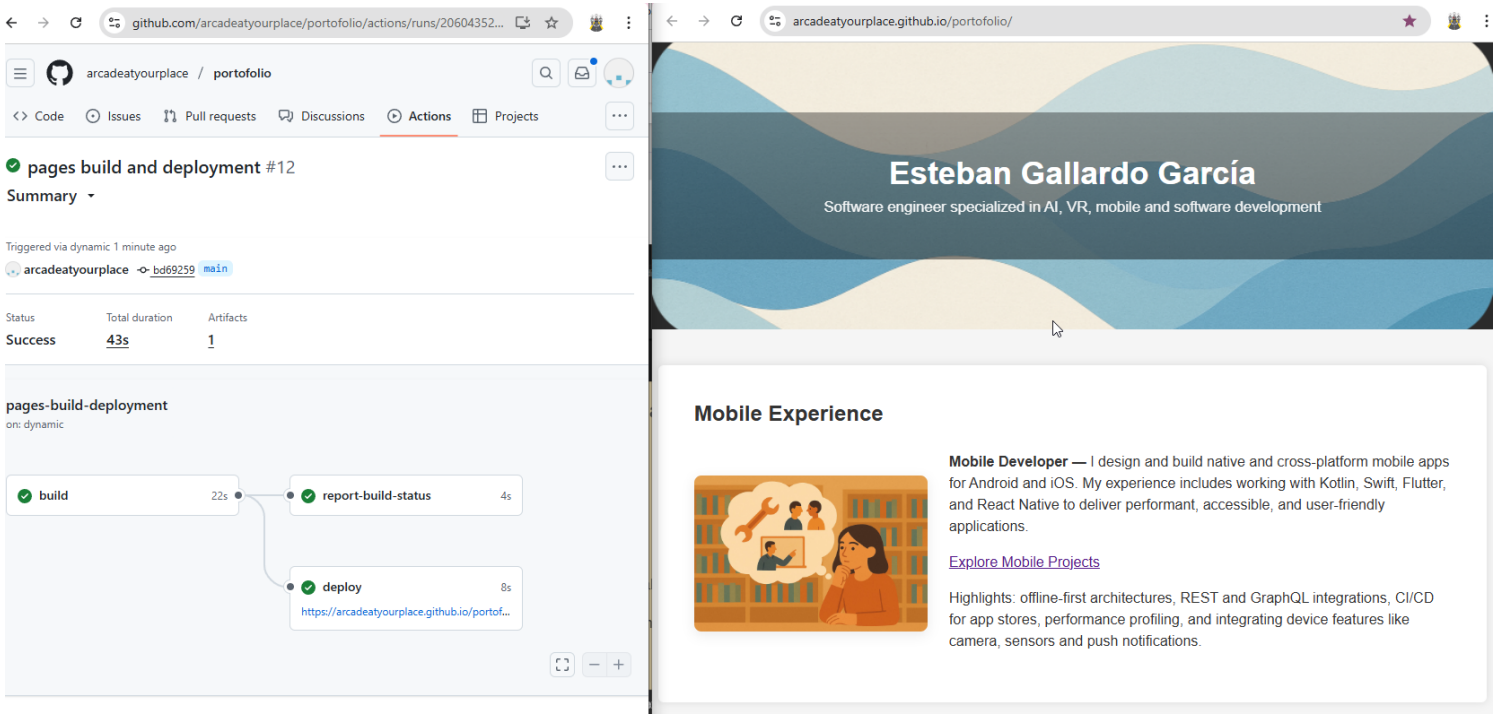
1. Wait until GitHub Actions has processed the changes
2. Open your GitHub Pages URL
3. Refresh the page
4. Verify your changes are online

🎉 You have successfully published a new version.

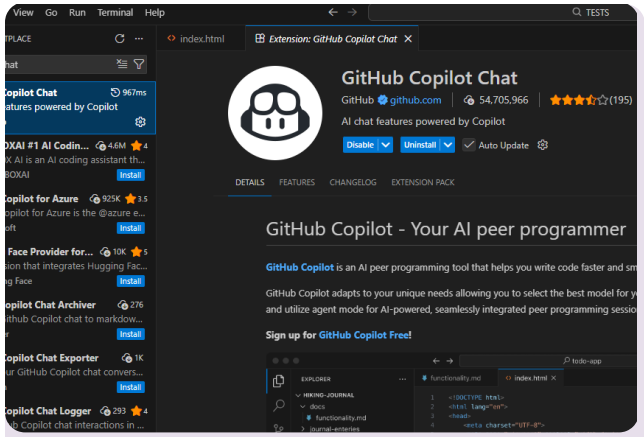

Commit
Pull
Push
Fetch
Branch
Merge
Stash
Discard
Tag
Git-flow
Remote
Terminal
Explorer
Settings
WORKSPACE
File Status
History
Search
BRANCHES
main
TAGS
REMOTES
STASHES
Pending files, sorted by file status
Search
Staged file
Unstage All
Unstage Selected
index.html
Unstaged files
Stage Selected
<header>
<h1>Esteban Gallardo García</h1>
Software engineer specialized in AI, VR, mobile and game development
<header class="hero" style="background-image:url('assets/banner.png')">

<h1>Esteban Gallardo García</h1>
Software engineer specialized in AI, VR, mobile and software development

</header>
EstebanGameDevelopment <services@yourvrexperience.com>
Commit options...
Updated the basic header description.
Push changes immediately to origin/main
Amend latest commit
Commit


github.com/arcadeatyourplace/portofolio/actions/runs/20604352...
arcadeatyourplace / portofolio
Code
Issues
Pull requests
Discussions
Actions
Projects
pages build and deployment #12
Summary
Triggered via dynamic 1 minute ago
arcadeatyourplace bd69259 main
Status
Success
Total duration
43s
Artifacts
1
pages-build-deployment
on: dynamic
build 22s
report-build-status 4s
deploy 8s
https://arcadeatyourplace.github.io/portof...
arcadeatyourplace.github.io/portofolio/
Esteban Gallardo García
Software engineer specialized in AI, VR, mobile and software development
Mobile Experience
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.
Explore Mobile Projects
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.

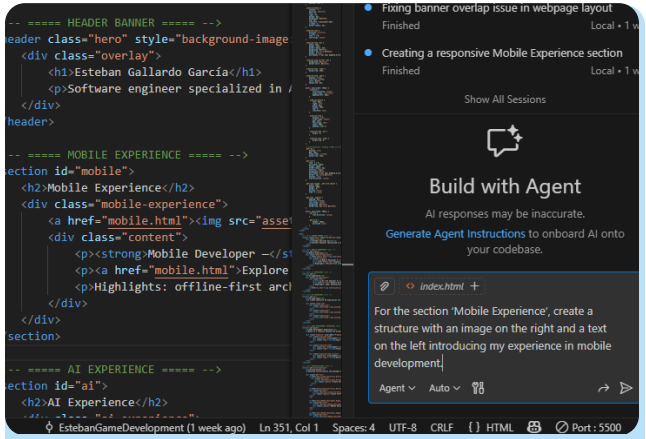
Using GitHub Copilot (Part 1/2)



Installing GitHub Copilot

GitHub Copilot is an AI assistant inside VS Code.

Steps

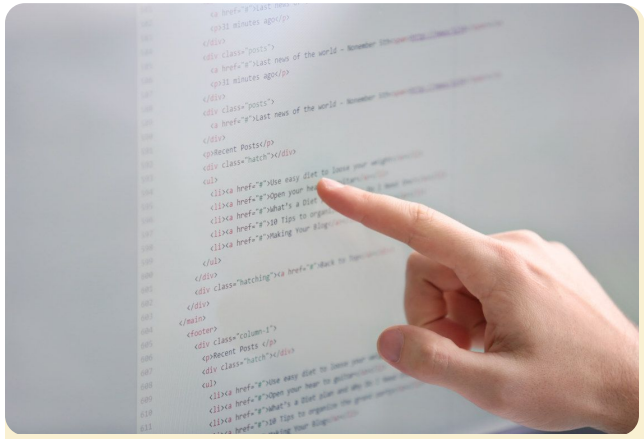


Asking Copilot for a change

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

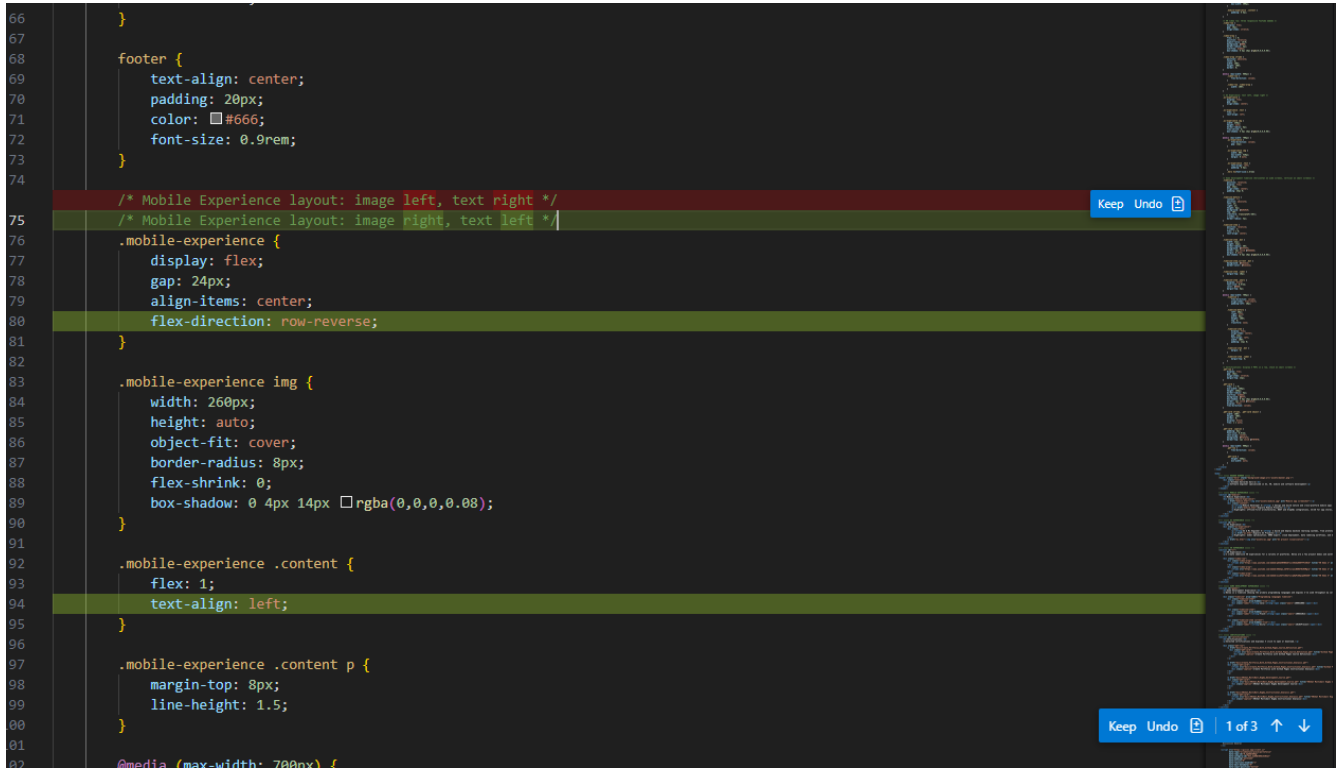
Important rule:

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

You are still in control — AI is your assistant.

Copilot will:

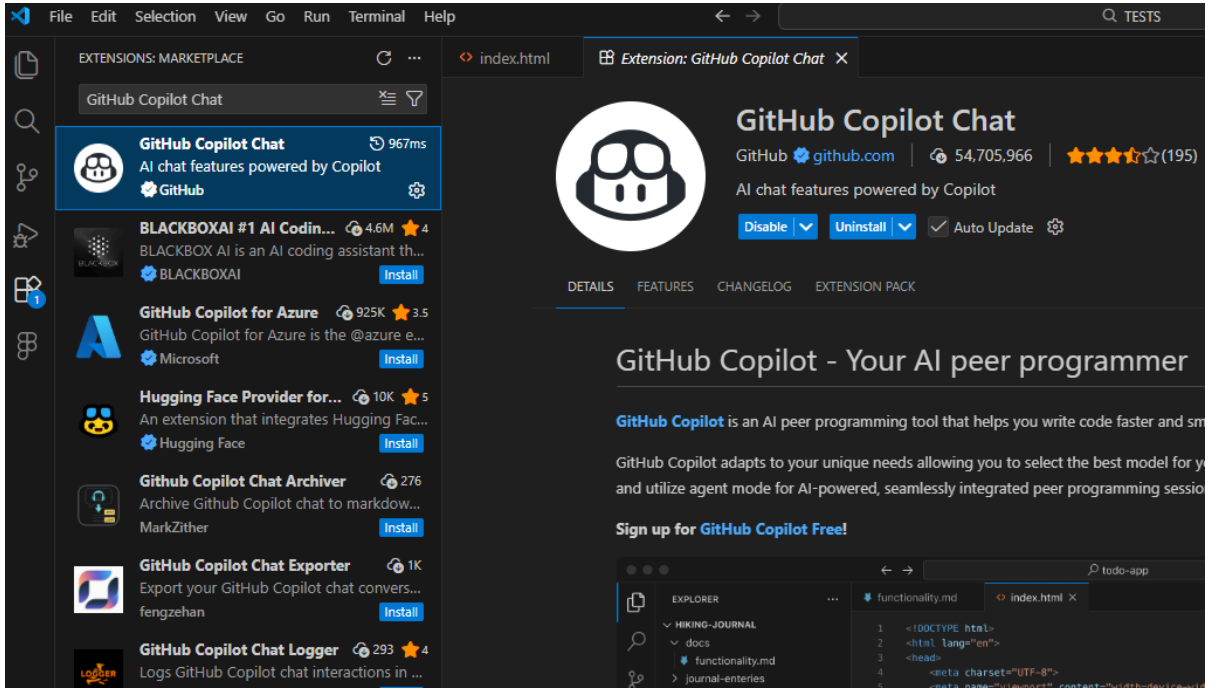
- Suggest HTML structure
- Possibly suggest CSS
- Explain changes



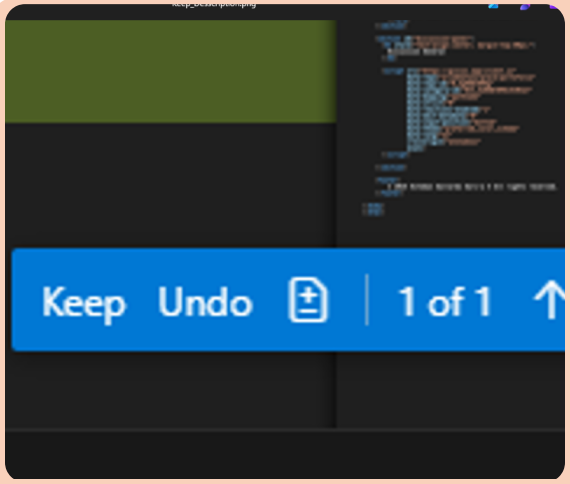
Steps:

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)



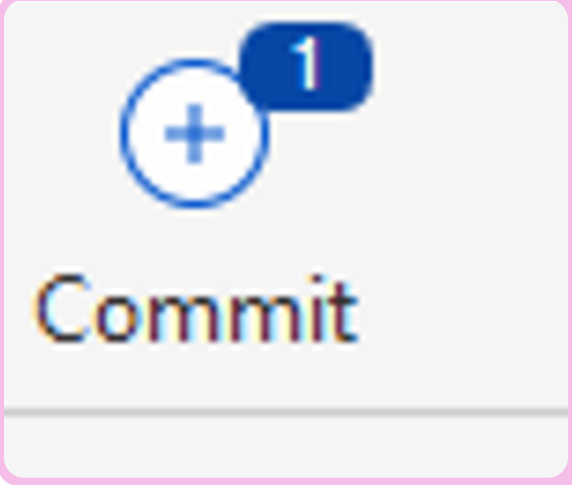
Press keep to confirm the changes.

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

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

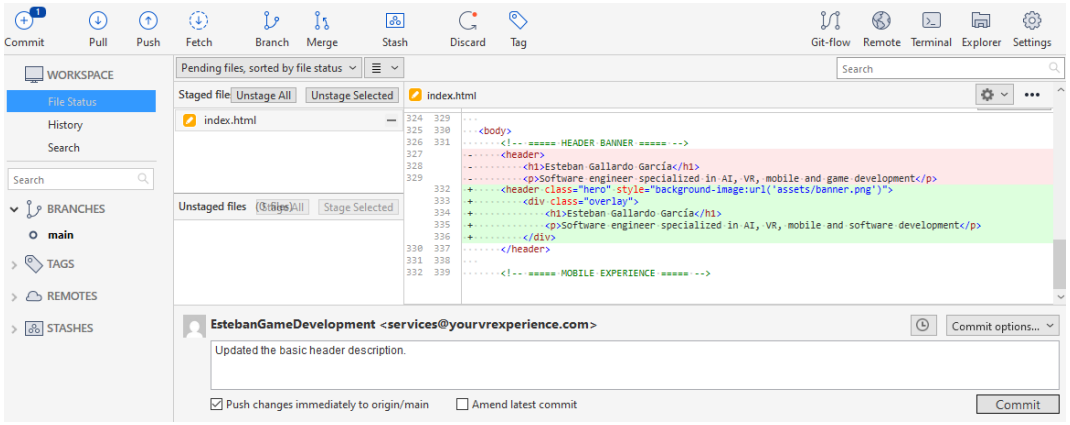
<iframe src="https://www.youtube.com/embed/qG3m40VB6eA?si=3E2byKOEYYFvhHnX" title="Location Demo 1" allowfullscreen allow="ac

<iframe src="https://www.youtube.com/embed/6Kb3qo_IAYU?si=yoLW60ATHJ94Mgly" title="Location Demo 2" allowfullscreen allow="ac

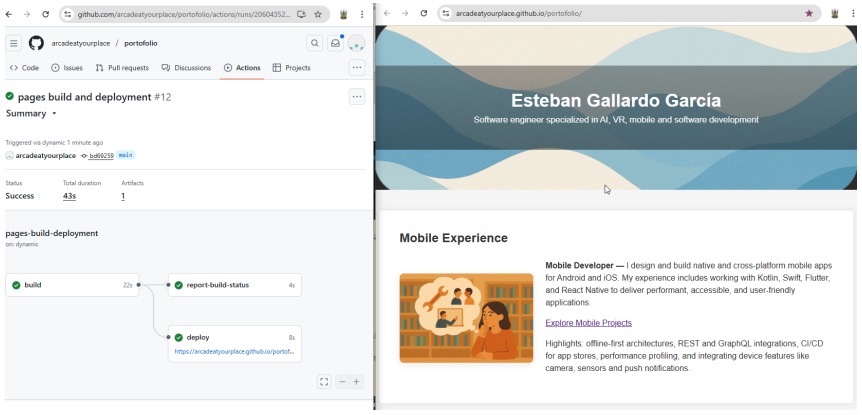
<iframe src="https://www.youtube.com/embed/oLj5mftsEZw?si=qKpPsGOpipmKhkAE" title="Location Demo 3" allowfullscreen allow="ac

</section>
<!-- ===== CONTACT FORM ===== -->
<section id="contact">
<h2>Get In Touch</h2>
Keep Undo 1 of 1

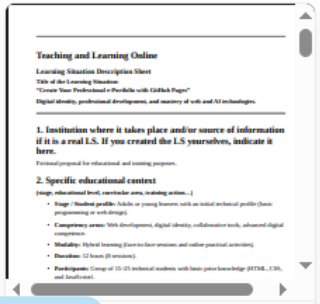
Commit & Push:



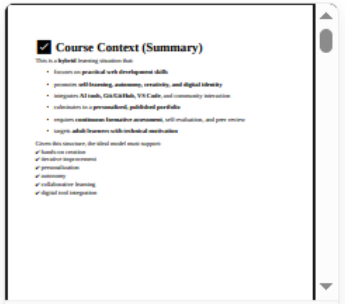
Git Actions and check website



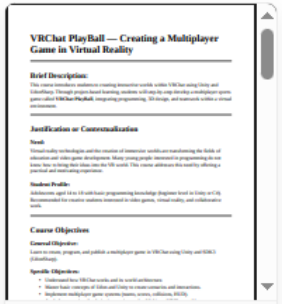
Selected certifications and diplomas — click to open or download.



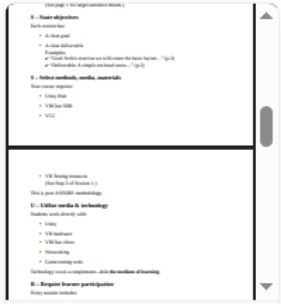
Portfolio with Github
Course Definition



Create Portfolio with Github Pages Instructional Analysis



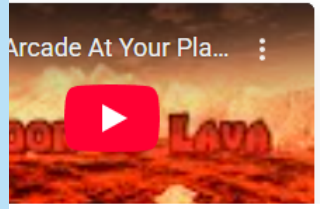
VRChat Multiball Rugby Development Course

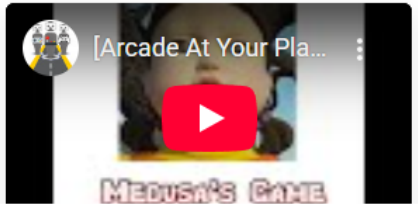


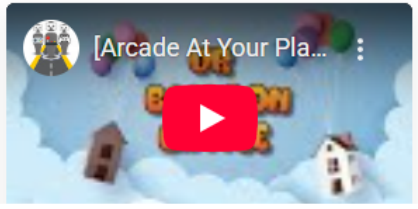
VRChat Multiball Rugby Instructional Analysis

on Based Experiences

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







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

Organization

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 <img> section

Goal:

- Replace placeholder image with the path to your image
  - **<img src="assets/my-image.jpg">**
- 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
        <a href="mobile.html"><img src="assets/mobile.jpg" alt="Mobile app screenshot"></a>
        <div class="content">
            <p><strong>Mobile Developer –</strong> I design and build native and cross-platfor
            <p><a href="mobile.html">Explore Mobile Projects</a></p>
            <p>Highlights: offline-first architectures, REST and GraphQL integrations, CI/CD
        </div>
    </div>
</section>
```

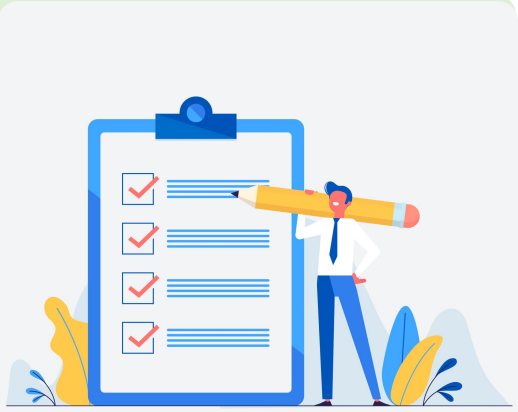
Follow link (ctrl + click)

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)

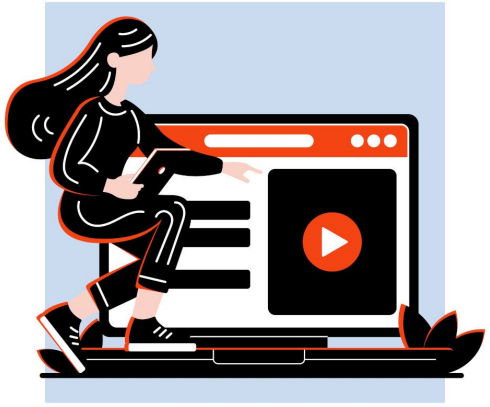
Prompt example:
"For the section 'AI Experience', align the text on the left and an image on the right."

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

Lorem ipsum dolor

Consectetur adipiscing elit

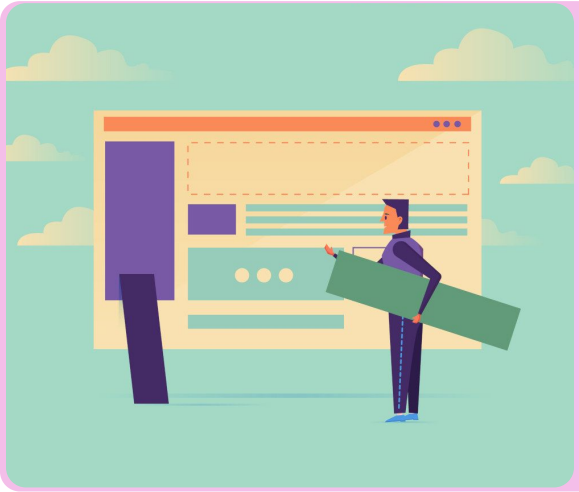
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed **do eiusmod tempor** incididunt ut labore et dolore magna aliqua.

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

Modifiying main layout



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.

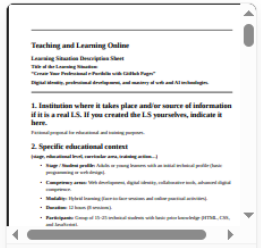
Java
2000–2008

Flash
2006–2012

Unity
2010–Present

Certifications

Selected certifications and diplomas — click to open or download.

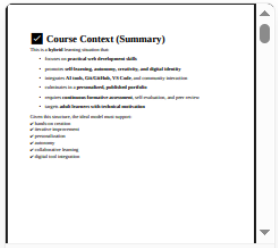

Teaching and Learning Online

Learning Situation Description Sheet

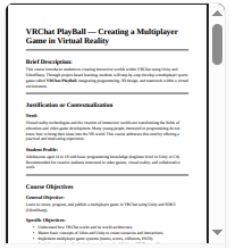
1. Institution where it takes place and/or source of information if it is a real LS. If you created the LS yourselves, indicate it here.

2. Specific educational context

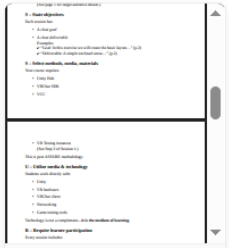
[Create Portfolio with Github Pages Course Definition]


Course Context (Summary)

[Create Portfolio with Github Pages Instructional Analysis]


VRChat PlayBall — Creating a Multiplayer Game in Virtual Reality

[VRChat Multiball Rugby Development Course]



[VRChat Multiball Rugby Instructional Analysis]

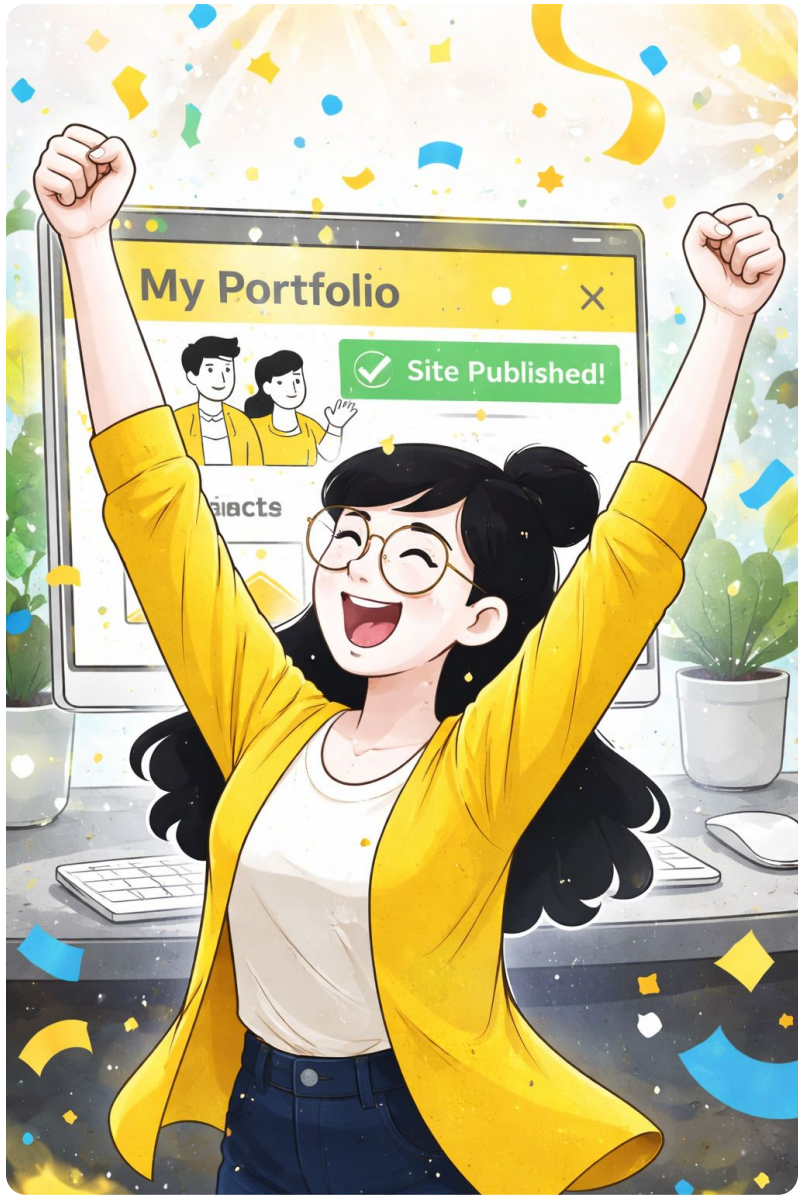
What You’ve Learned

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.

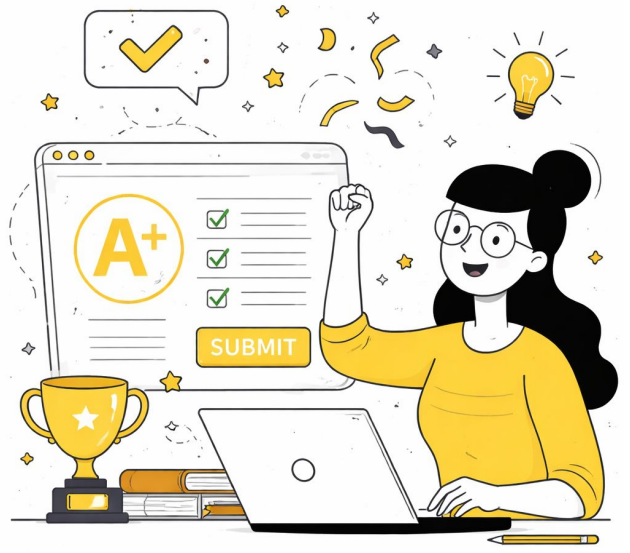
Next



Knowledge Test Questions

Fast Local Development with VS Code

Purpose of Local Development	Question
Role of Live Server	Question
Understanding the Workflow	Question
Role of AI in Local Development	Question



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