Setup

AI-Assisted Programming for PhD Researchers

This page walks you through everything you need to install and configure **before** the workshop begins on 1 September 2026. Work through it in order. If you get stuck at any step, email me early. Do not wait until Day 1.

> ! Before you arrive — checklist
>
> Complete all of these by **25 August 2026** (one week before the course):
>
> - ☐ **Zed installed** and opening on your machine
> - ☐ **Zed student plan applied for** (verification can take up to 72 hours, so apply early)
> - ☐ **Mistral account created** (free "Experiment" plan) and **training opt-out enabled**, with an API key saved somewhere you can paste from
> - ☐ **GitHub account** created (only if you don't already have one)
> - ☐ **uv installed** (`uv --version` prints a version), which also brings Python automatically
>
> You do **not** need to install Git or OpenCode beforehand. We install those together in class on Day 1.

1. Install Zed

Zed is the editor we use throughout the course. Install it for your operating system.

macOS

Install with Homebrew:

```
brew install --cask zed
```

Or download the installer directly from zed.dev.

Windows

Download and run the installer from zed.dev/windows.

> ⚠ Warning
>
> Zed on Windows needs a **DirectX 11-capable GPU**. If Zed opens to a blank or black window, update your GPU drivers. If it still won't render, use the **VS Code fallback** below: everything in the course works there too.

Linux

Install with the official script:

```
curl -f https://zed.dev/install.sh | sh
```

2. Apply for the Zed student plan

The student plan gives you Zed Pro features free for 12 months. Apply as early as possible; verification can take up to 72 hours.

1. Open Zed and **sign in with your GitHub account**. Your GitHub account must be **at least 30 days old** to sign in.
2. Go to zed.dev/education and submit your **university email address** for verification.
3. Once verified you get **unlimited edit predictions** and **$10/month in model credits for 12 months**.

> Tip
>
> If your university email address isn't recognized by the verification system, **email me**. This can be resolved, but do it **early**, well before the 25 August deadline.

If your verification is still pending when the course starts, you are not blocked: the free tier gives you 2,000 edit-prediction completions per month, and every lab works without the paid plan. See the FAQ.

3. Create a Mistral account

We use Mistral as the model provider for the labs. It is EU-hosted, has a usable free tier, and its coding models are a good fit for the exercises.

1. Go to console.mistral.ai and sign up.
2. Choose the free **"Experiment"** plan. This requires **phone verification** but **no credit card**.
3. Create an **API key** and store it somewhere you can copy-paste from on Day 1 (a password manager or a secure note, not a public file).

> ! Opt out of training on your data
>
> On the free tier, Mistral uses your inputs and outputs to train its models **by default**. Turn this off before you use the key:
>
> Open the **Admin Console** → **Privacy** menu, and under **"Anonymous improvement data"** disable the toggle. Once opted out, Mistral no longer uses your input or output data to train its models.

4. Create a GitHub account

Skip this step if you already have a GitHub account (and it is at least 30 days old for the Zed sign-in above).

If you don't, create a free account at github.com. We use it to clone the lab project and, optionally, to publish your capstone at the end of the course.

5. Install uv

uv is the Python and project manager that every lab uses. Install it for your operating system, then verify.

macOS / Linux

```
curl -LsSf https://astral.sh/uv/install.sh | sh
```

Windows

```
powershell -ExecutionPolicy ByPass -c "irm https://astral.sh/uv/install.ps1
| iex"
```

Then confirm it is installed:

```
uv --version
```

> **Note**
>
> You do **not** need to install Python separately. uv downloads the correct Python version automatically the first time a lab needs it.

6. Fallback: VS Code

If Zed will not run on your machine (for example, an older Windows GPU), install VS Code instead. Everything in the course works there too: OpenCode runs in its integrated terminal. The only thing you lose is Zed's built-in edit prediction (autocomplete).

> **Note**
>
> Agent sessions run more smoothly with at least **8 GB of RAM**. If your machine is tight on memory, close other heavy applications during the labs.

7. Verify your setup

Run through this self-check before the course. If every item passes, you are ready.

1. **Zed opens** on your machine (or VS Code, if you used the fallback).
2. You are **signed in** to Zed with GitHub.

3. Your **student-plan status is visible** in Zed (verified, or pending).
4. You can log in to console.mistral.ai and **see your API key**, with **training opt-out enabled**.
5. Running `uv --version` **prints a version number**.

If anything fails and you can't resolve it from this page, email me before 25 August. See the FAQ for common questions.

Bibliography