EASTD199 Software Installation

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Overview

This guide is organized into two sessions:

- **Session 1: Quick Setup with AI Agents** — Register a GitHub account, install Antigravity and Codex, then use them to install everything else (package managers, Git, GitHub CLI, GLM-OCR) and fix common issues.
- **Session 2: Step-by-Step Reference** — Detailed manual instructions for every tool, in case you prefer to do things yourself or need to troubleshoot.

Session 1: Quick Setup with AI Agents

The idea behind this session is simple: register a GitHub account first (you will need it later), then install two AI-powered tools, and let them help you install and configure everything else. You do not need to memorize commands — just describe what you need in plain English.

1.1 Register a GitHub Account

Note

This step must be done manually — AI agents cannot create accounts for you. If you already have a GitHub account, skip to 1.2.

GitHub is a cloud platform for hosting code and websites. You will need a GitHub account for Git configuration, GitHub CLI authentication, and publishing your website to GitHub Pages.

1. Go to https://github.com/signup.
2. Enter your email, password, and username (or click **"Continue with Google"**).
3. Complete the verification and click **"Create account"**.
4. Verify your email by clicking the link GitHub sends you.

Tip

Choose your username carefully — it will become part of your website URL: `https://your-username.github.io`. A short, professional username is recommended.

1.2 Install Antigravity

Antigravity is a free, AI-powered code editor developed by Google. It is built on top of Visual Studio Code (VS Code) with built-in AI assistants (powered by Gemini) that can write code, generate files, debug errors, and run terminal commands on your behalf.

1. Go to https://antigravity.google/download.
2. Download the installer for your operating system (the site auto-detects it).
3. Install:
   - **macOS**: Open the `.dmg`, drag Antigravity into Applications. If macOS blocks it, go to **System Settings** > **Privacy & Security** > **Open Anyway**.
   - **Windows**: Run the `.exe` installer and follow the prompts.
4. **Create a project folder**: Before opening Antigravity, create a folder called `eastd199` on your Desktop. This will be your working folder for this workshop.

- **macOS**: Open Finder → go to Desktop → right-click → **New Folder** → name it `eastd199`.
- **Windows**: Open File Explorer → go to Desktop → right-click → **New** → **Folder** → name it `eastd199`.

5. **Launch Antigravity.** You will see the welcome screen. Click **Next** to proceed.

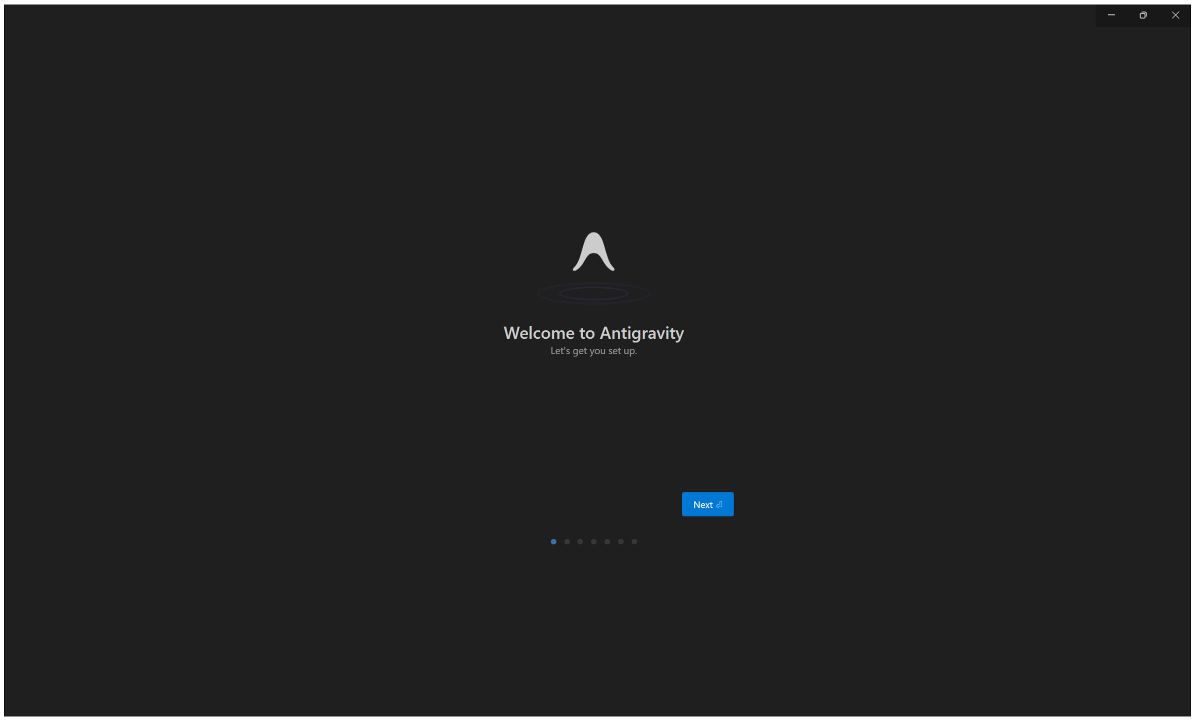

Welcome to Antigravity
Let's get you set up.

Figure 1: Welcome to Antigravity

6. **Choose setup flow**: Select **"Start fresh"** (unless you have VS Code, Windsurf, or Cursor settings you want to import). Click **Next**.

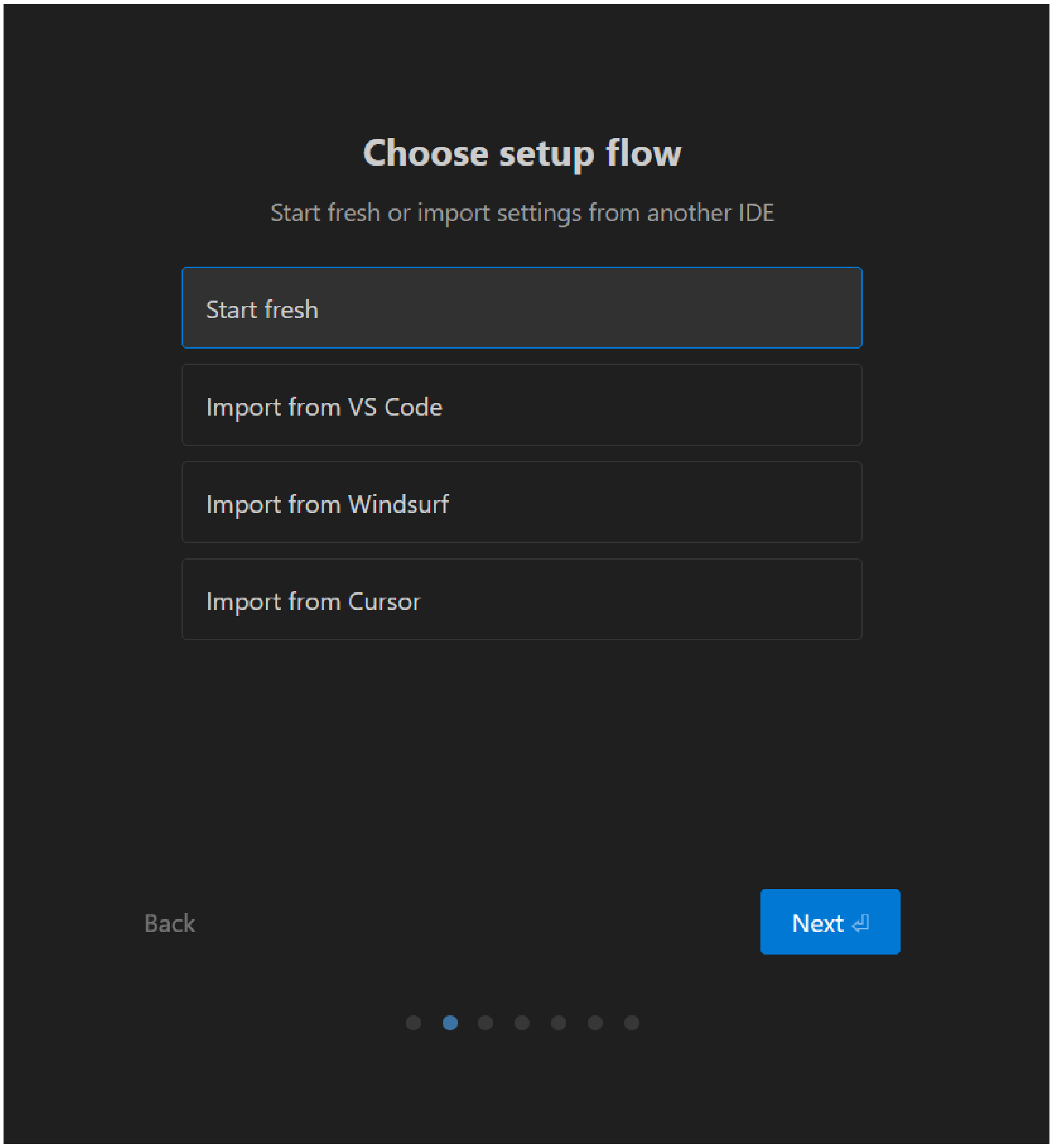


Figure 2: Choose setup flow — select “Start fresh”

7. **Choose an editor theme**: Pick whichever theme you prefer (Dark Modern is the default). Click **Next**.

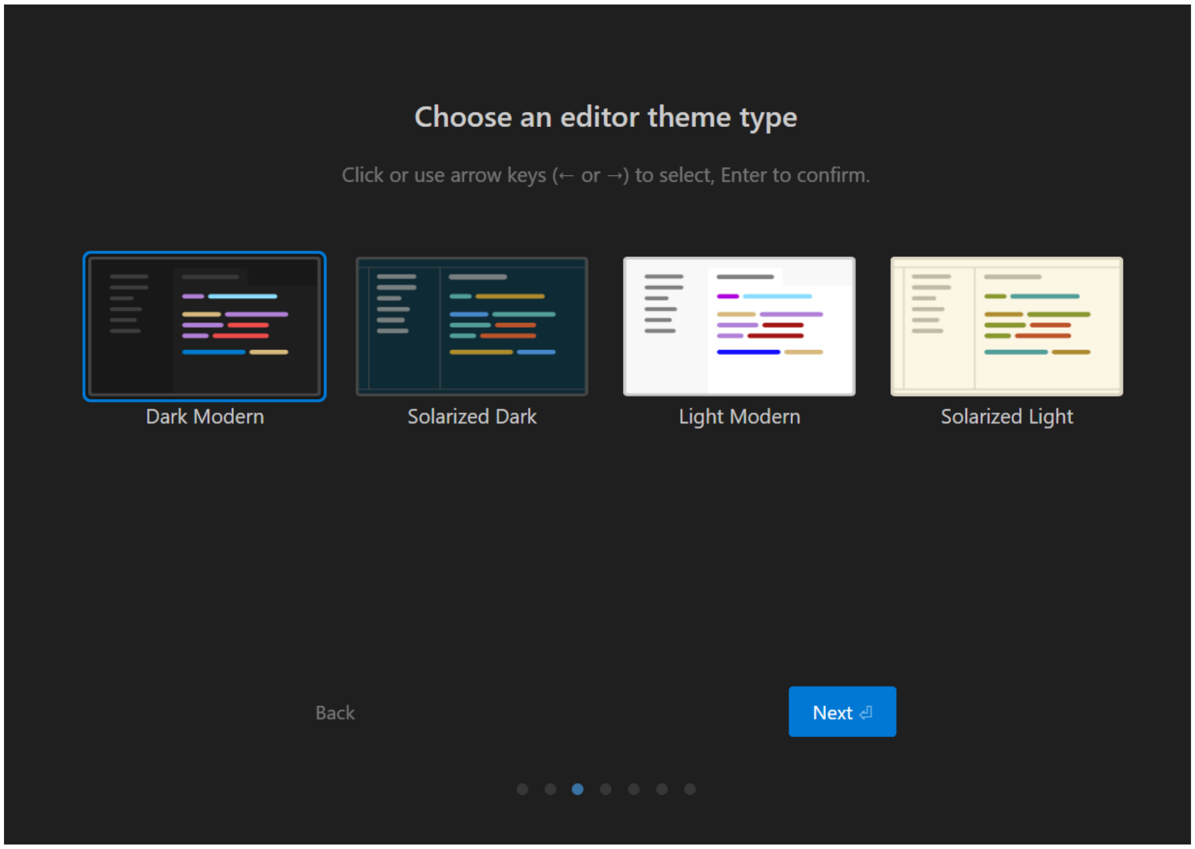
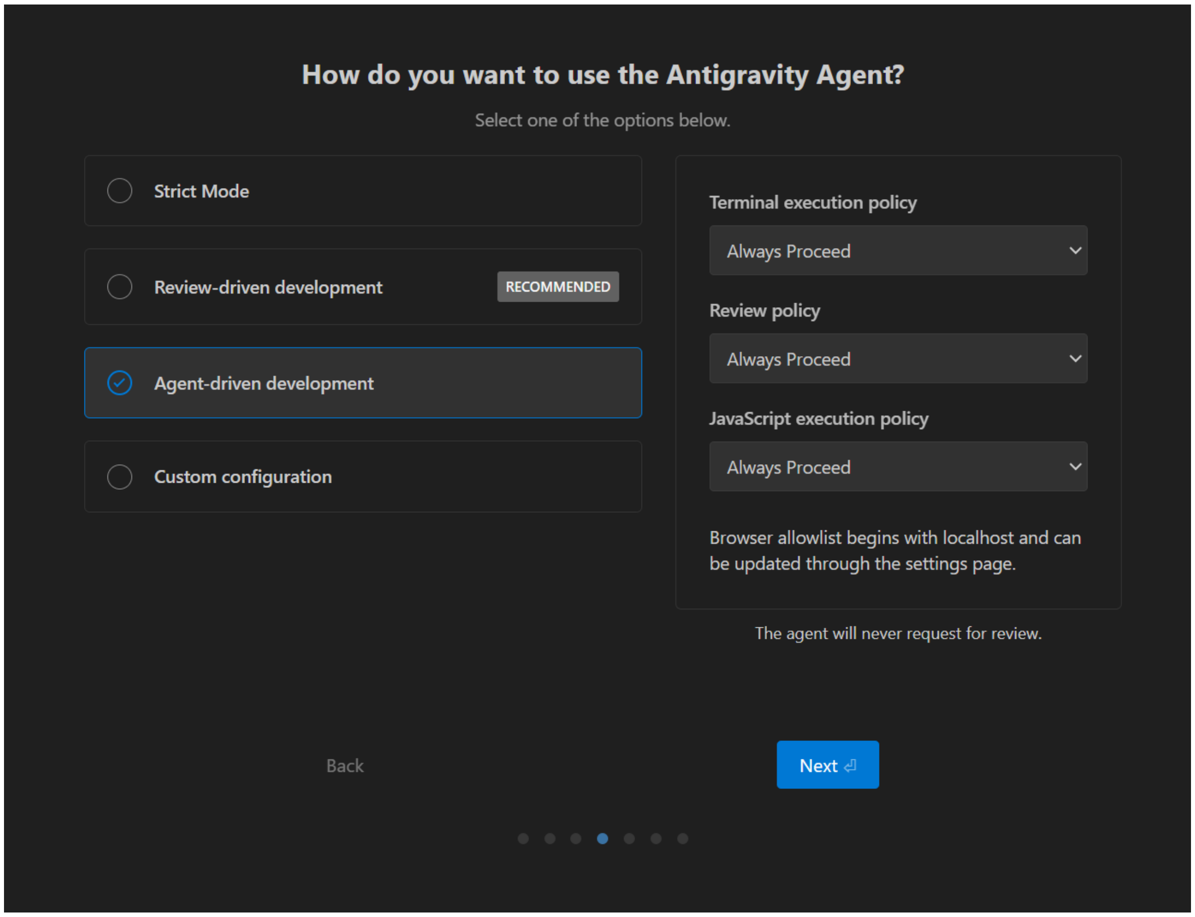

Choose an editor theme type
Click or use arrow keys (← or →) to select, Enter to confirm.
Dark Modern
Solarized Dark
Light Modern
Solarized Light
Back
Next

Figure 3: Choose an editor theme

8. **Choose agent mode**: Select **"Agent-driven development"**. This gives the AI agent full autonomy to execute terminal commands and write files on your behalf — which is what we want for this workshop. Click **Next**.



How do you want to use the Antigravity Agent?

Select one of the options below.

- Strict Mode
- Review-driven development RECOMMENDED
- [✓ Agent-driven development]
- Custom configuration

Terminal execution policy: Always Proceed

Review policy: Always Proceed

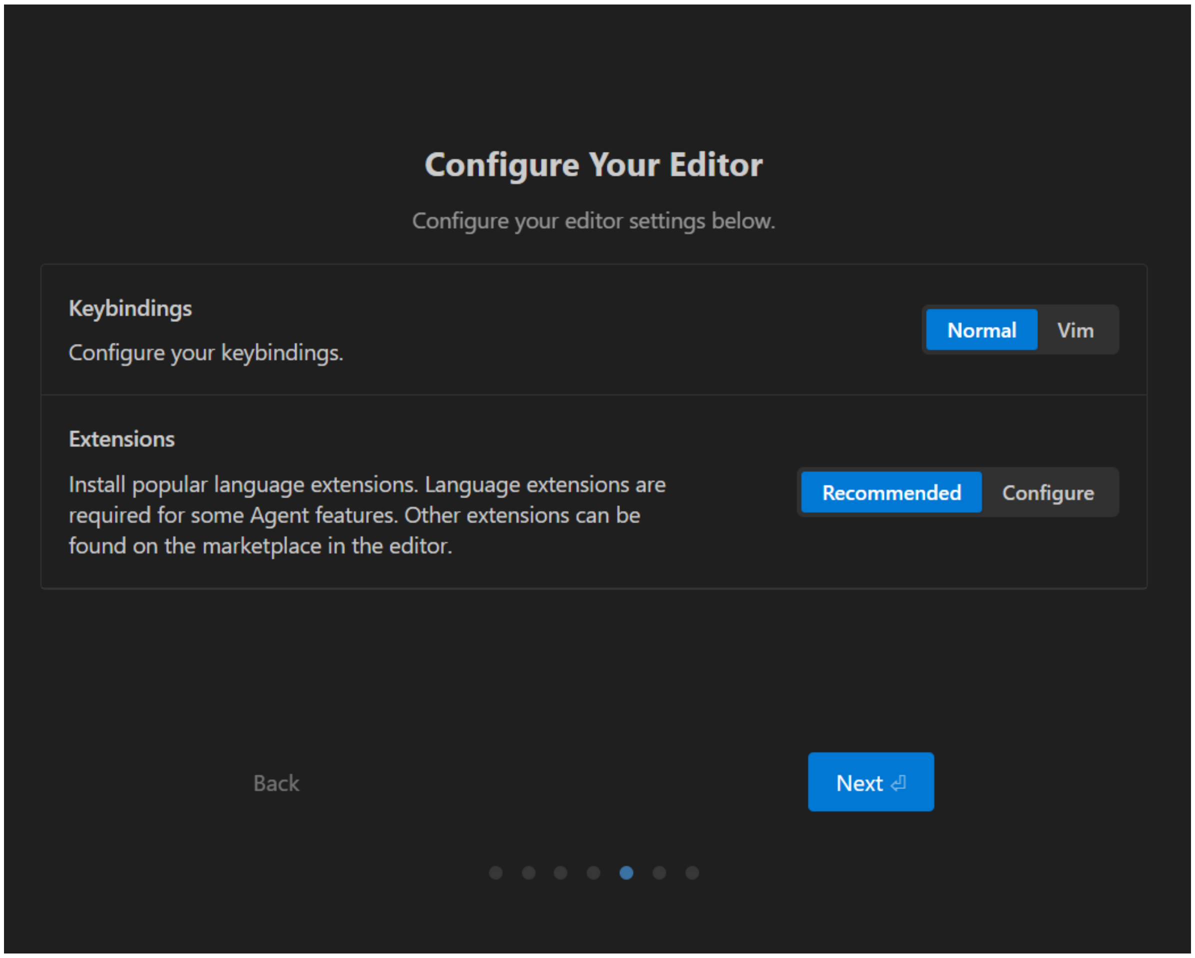
JavaScript execution policy: Always Proceed

Browser allowlist begins with localhost and can be updated through the settings page.

The agent will never request for review.

Figure 4: Select "Agent-driven development"

9. **Configure your editor**: Keep the default settings — **Normal** keybindings and **Recommended** extensions. Click **Next**.



Configure Your Editor

Configure your editor settings below.

Keybindings

Configure your keybindings.

[✓ Normal] Vim

Extensions

Install popular language extensions. Language extensions are required for some Agent features. Other extensions can be found on the marketplace in the editor.

[✓ Recommended] Configure

Figure 5: Configure editor — keep defaults

10. **Sign into Google**: Click **“Sign in with Google”** and log in with your Gmail account.

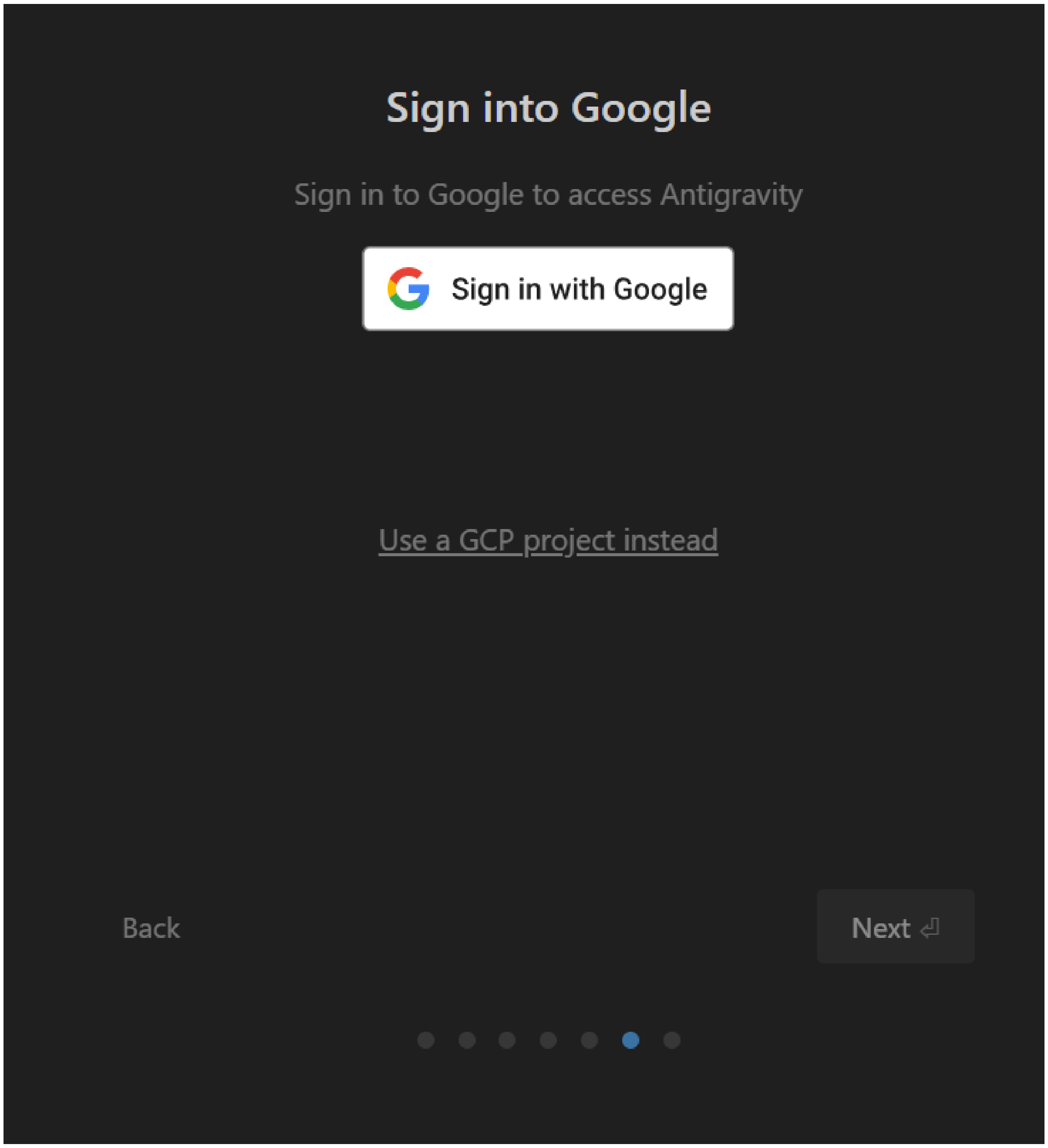
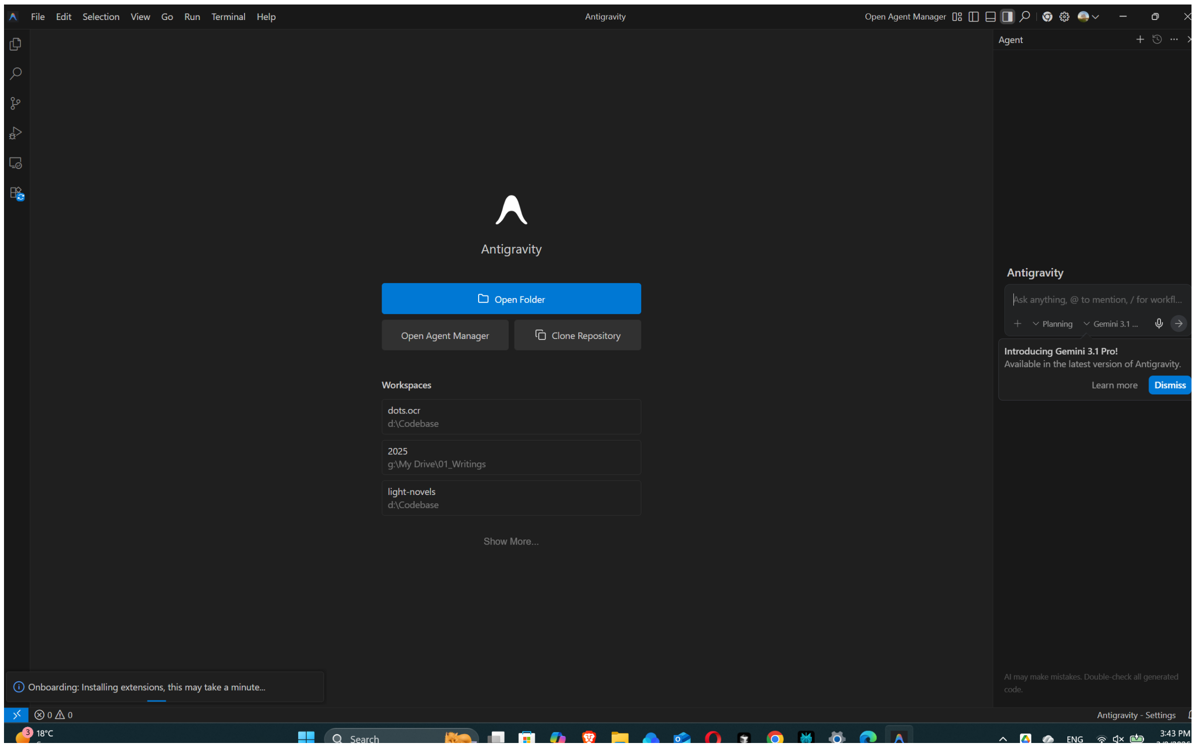

Sign into Google
Sign in to Google to access Antigravity
Sign in with Google
Use a GCP project instead
Back
Next ⏎

Figure 6: Sign in with Google

11. **Open the project folder**: After sign-in, you will see the main Antigravity screen. Click **“Open Folder”** and select the `eastd199` folder on your Desktop.



dots.ocr
d:\Codebase

2025
g:\My Drive\01_Writings

light-novels
d:\Codebase

Introducing Gemini 3.1 Pro!
Available in the latest version of Antigravity.

AI may make mistakes. Double-check all generated code.

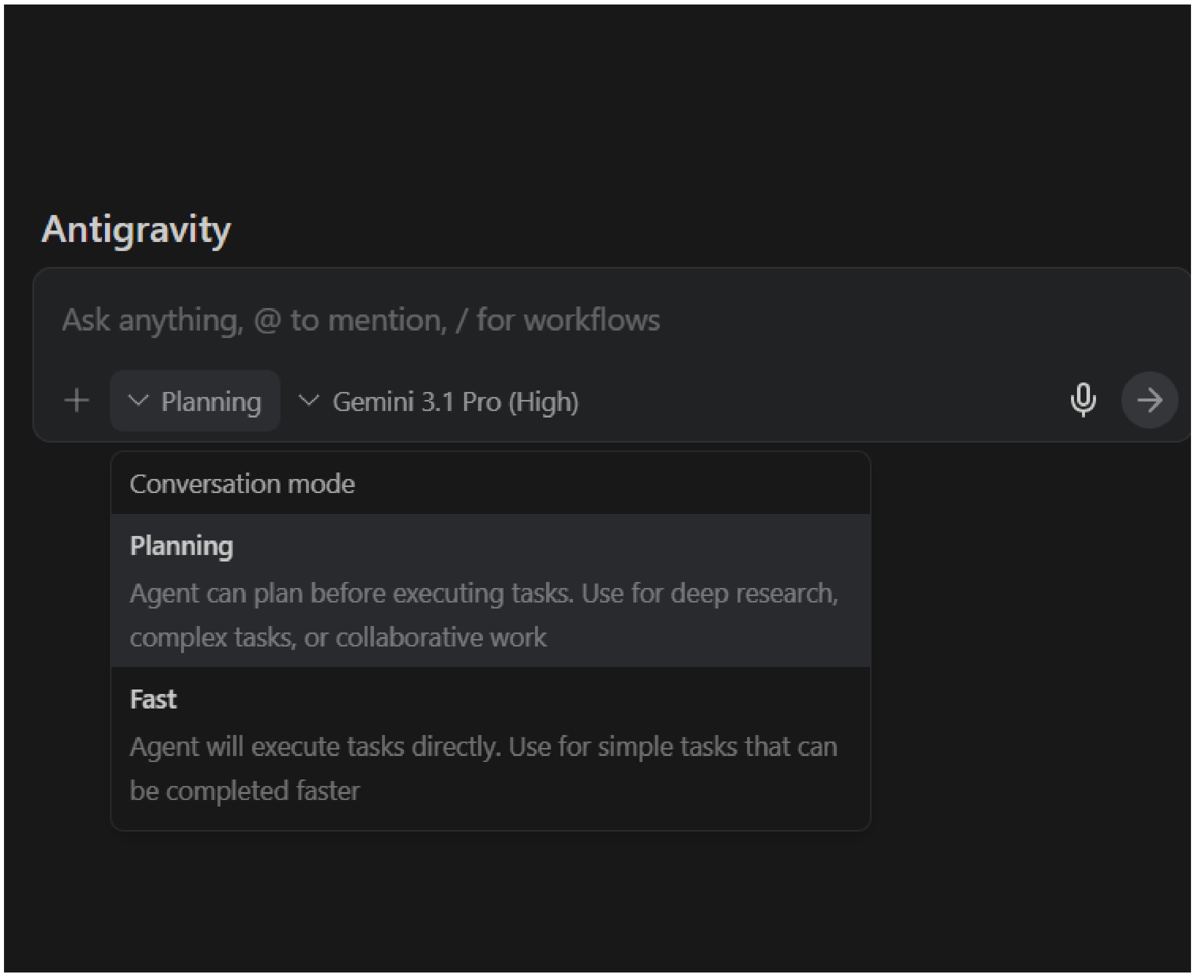
Onboarding: Installing extensions, this may take a minute...

Figure 7: Main screen — click "Open Folder"

! Important

Antigravity's AI features (including the terminal and chat panel) require an **open folder** to work properly. Always open a folder before using the AI chat or running terminal commands.

12. **Open the AI chat panel**: Press `Cmd+Shift+I` (macOS) or `Ctrl+Shift+I` (Windows). You will see the Antigravity chat panel on the right side. You can choose between **Planning** mode (for complex tasks) and **Fast** mode (for simple tasks).



Conversation mode

Planning
Agent can plan before executing tasks. Use for deep research, complex tasks, or collaborative work

Fast
Agent will execute tasks directly. Use for simple tasks that can be completed faster

Figure 8: Chat panel with Planning and Fast modes

13. Test it with a simple prompt:

```
Hello! Can you create a simple HTML page that says "Hello, World!"?
```

> **Tip**
>
> Antigravity retains the full VS Code extension ecosystem. You can install any VS Code extension (e.g., Live Server, Python, Quarto) from the Extensions panel in the left sidebar.

1.3 Install Codex (via Antigravity)

Codex is an open-source coding agent by OpenAI that runs in your terminal. You give it a natural-language instruction, and it reads your files, writes code, and executes commands — all locally on your machine.

Instead of installing Codex manually, let Antigravity do it for you. Open Antigravity's chat panel (`Cmd+Shift+I` / `Ctrl+Shift+I`) and use this prompt:

Antigravity AI Prompt — Install Codex

macOS:

```
Help me install OpenAI Codex CLI on my Mac:
1. Check if Node.js 22+ is installed by running node --version.
   If not, install it using Homebrew (brew install node).
   If Homebrew is not installed either, install Homebrew first.
2. Install Codex by running: npm install -g @openai/codex
   Important: the package name must be @openai/codex, not codex.
3. Verify the installation by running: codex --version
```

Windows:

```
Help me install OpenAI Codex CLI on Windows:
1. Check if Node.js 22+ is installed by running node --version.
   If not, walk me through downloading and installing it from
   https://nodejs.org, making sure "Add to PATH" is checked.
2. Install Codex by running: npm install -g @openai/codex
   Important: the package name must be @openai/codex, not codex.
3. Verify the installation by running: codex --version
```

After installation, run `codex` in the terminal and sign in with your ChatGPT account when prompted.

Tip

As a Harvard student, you have access to ChatGPT Edu through Harvard. Go to https://www.huit.harvard.edu/openai-chatgpt-edu to activate your account. Once activated, you can use your Harvard ChatGPT Edu account to authenticate Codex.

Note

Windows users: Codex works best on macOS and Linux. On Windows, the recommended approach is to use Codex inside **WSL** (Windows Subsystem for Linux).

1.4 Use AI Agents to Install Everything Else

Now that you have a GitHub account, Antigravity, and Codex, use them to install and configure the remaining tools. Pick whichever agent you prefer — both can accomplish the same tasks.

Install Homebrew (macOS) or Verify winget (Windows)

A **package manager** lets you install software from the command line with a single command, instead of downloading installers from websites.

Antigravity AI Prompt — Package Manager

macOS:

```
I'm on macOS. Check if Homebrew is installed by running
brew --version. If not, install it for me. After installation,
make sure it is added to my PATH and verify it works.
```

Windows:

```
I'm on Windows. Check if winget is installed by running
winget --version. If it is not recognized, walk me through
updating App Installer from the Microsoft Store to get winget.
```

Codex Prompt — Package Manager

macOS:

```
codex "Check if Homebrew is installed. If not, install it. After installation, verify it wo
```

Windows:

```
codex "Check if winget is installed by running winget --version. If not found, explain how
```

Install Git and GitHub CLI

Antigravity AI Prompt — Git and GitHub CLI

```
Check if Git and GitHub CLI are installed on my computer by
running git --version and gh --version. If either is missing,
install them using [Homebrew / winget]. After installation,
verify both tools are working. Then run gh auth login so I
can authenticate with my GitHub account.
```

Replace `[Homebrew / winget]` with your platform's package manager.

Codex Prompt — Git and GitHub CLI

```
codex "Check if Git and GitHub CLI (gh) are installed. If not, install them using [brew / w
```

Configure Git and Fix the Email Issue

Once Git is installed, use an agent to configure Git and set up email privacy:

Antigravity AI Prompt — Configure Git and Email Privacy

```
Help me configure Git and set up commit email privacy:

1. Set my Git username with git config --global user.name
2. Check my current commit email with git config --global user.email
3. Walk me through going to https://github.com/settings/emails
   to enable "Keep my email addresses private" and
   "Block command line pushes that expose my email"
4. Update my local git config to use the GitHub noreply email
   (format: ID+USERNAME@users.noreply.github.com)
5. Verify the change with a test commit
```

Codex Prompt — Configure Git and Email Privacy

```
codex "Configure my Git user.name to 'My Name'. Then check my commit email with git config
```

Publish to GitHub Pages

Antigravity AI Prompt — Full Website and GitHub Pages

```
Help me create and deploy a personal website to GitHub Pages:

1. Create a GitHub repository named my-username.github.io
   using gh repo create (replace my-username with my actual
   GitHub username)
2. Build a complete personal academic website using plain HTML
   and CSS with these files:
   - style.css: clean minimal academic design with dark nav bar,
     serif font, blog entry layout, and footer
   - index.html: About Me with bio, research interests, contact
   - publications.html: Journal Articles, Book Chapters,
     Conference Papers with placeholder citations
   - projects.html: two placeholder projects
   - blog.html: one sample blog entry with date
   All pages share the same nav bar and footer, link to style.css
3. Create .github/workflows/deploy.yml to deploy plain HTML/CSS
   to GitHub Pages using the official actions (configure-pages,
   upload-pages-artifact, deploy-pages), triggered on push to
   main and manual dispatch
4. Commit everything and push to GitHub
5. Tell me how to enable GitHub Pages in Settings > Pages
   by selecting "GitHub Actions" as the source
```

Codex Prompt — Full Website and GitHub Pages

```
codex "Create a GitHub repo named my-username.github.io using gh repo create --public --cl
```

After the push completes, go to your repository on GitHub → **Settings** → **Pages** → select **GitHub Actions** as the source. Your site will be live at `https://your-username.github.io`.

Install GLM-OCR

GLM-OCR is a local OCR tool that uses the GLM-OCR model (a 0.9B parameter vision-language model) to convert scanned documents and images into structured Markdown with tables, formulas, and layout-aware text — all running locally on your machine. No data leaves your computer.

- **macOS (Apple Silicon)**: Uses the MLX framework for fast local inference on the Metal GPU.
- **Windows**: Uses Ollama for local inference.

Antigravity AI Prompt — Install GLM-OCR

macOS (Apple Silicon only — M1/M2/M3/M4):

```
Help me install GLM-OCR from https://github.com/fccs-dci/glm-ocr-mlx:
1. Check if Python 3.12+ is installed (python3 --version).
   If not, install it.
2. Check if Git is installed. If not, install it.
3. Clone the repository: git clone https://github.com/fccs-dci/glm-ocr-
mlx.git
4. Tell me to double-click launch.command in Finder to start the
   application. It will automatically create a virtual environment,
   download model weights, and open the web UI at localhost:5003.
```

Windows:

```
Help me install GLM-OCR from https://github.com/fccs-dci/glm-ocr-mlx:
1. Check if Python 3.12+ is installed (python --version).
   If not, install it and make sure "Add to PATH" is checked.
2. Check if Git is installed. If not, install it using winget.
3. Clone the repository: git clone https://github.com/fccs-dci/glm-ocr-
mlx.git
4. Tell me to double-click launch.bat to start the application.
   It will automatically install Ollama if needed, download the
   model, and open the web UI at localhost:5003.
```

Codex Prompt — Install GLM-OCR

```
codex "Clone https://github.com/fccs-dci/glm-ocr-mlx.git and tell me how to launch it. On m
```

! Important

GLM-OCR requires an **Apple Silicon Mac** (M1/M2/M3/M4) for the macOS version. It does **not** work on Intel Macs. On the first run, the launcher downloads model weights (~20 GB on macOS, ~5 GB on Windows), so make sure you have enough disk space and a stable internet connection.

Customize Your Website

Once the basic site is deployed, try these prompts to customize it:

Add a Profile Photo

```
Add a profile photo to index.html. The image file is called
photo.jpg and should appear at the top of the page, centered,
with a circular crop and a max width of 200px.
Add the necessary CSS to style.css.
```

Make It Responsive

```
Make my website responsive for mobile devices. Update style.css
so that the navigation bar stacks vertically on small screens,
the body padding adjusts, and text sizes scale appropriately.
Use CSS media queries for screens smaller than 600px.
```

Change the Color Scheme

```
Change the color scheme of my website to use a light blue
navigation bar (#3498db) with white text, and update the
heading colors to match. Keep the design clean and professional.
```

Add a New Blog Post

```
Add a new blog post to blog.html. The title is "My Research Update",
the date is March 9, 2026, and the content is a short paragraph
about discovering a new primary source. Put it above the existing
blog entry so newest posts appear first.
```

Session 2: Step-by-Step Reference

This section provides detailed manual instructions for every tool. Use it if you prefer to install things yourself, if the AI agent approach did not work, or if you need to troubleshoot a specific step.

Package Managers

A **package manager** lets you install, update, and manage software from the command line with a single command.

Homebrew (macOS)

Homebrew is the most popular package manager for macOS. Open **Terminal** and run:

```
/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sl
```

The script will explain what it will do and pause before doing it. Follow the on-screen instructions — you may need to enter your password.

After installation, verify it works:

```
brew --version
```

> ❗ Important
>
> After installation, Homebrew may display instructions to add it to your `PATH`. If you see a message like "Add Homebrew to your PATH", **follow those instructions** — otherwise the `brew` command will not be recognized in new terminal sessions.

winget (Windows)

winget is Windows' built-in package manager. It comes **pre-installed** on Windows 10 (version 1809+) and Windows 11.

Verify it is available by opening **PowerShell** or **Command Prompt**:

```
winget --version
```

If the command is not recognized, update the **App Installer** from the Microsoft Store:

1. Open the **Microsoft Store**.
2. Search for **"App Installer"**.
3. Click **Update** (or **Install** if it is not installed).

After updating, restart your terminal and try `winget --version` again.

Antigravity (Code Editor)

Antigravity is a free, AI-powered code editor by Google, built on VS Code with built-in Gemini AI assistants.

System Requirements

Requirement	Details
Operating system	macOS, Windows, or Linux
Account	A Gmail account (personal Gmail is fine)
Browser	Chrome (for some companion features)
Cost	Free for individuals

Installation

1. Go to https://antigravity.google/download.
2. Download the installer for your platform.
3. Install:

macOS:

1. Open the downloaded `.dmg` file.
2. Drag the **Antigravity** icon into the **Applications** folder.
3. Open Antigravity from your Applications folder.
4. If macOS displays a security warning, go to **System Settings > Privacy & Security** and click **"Open Anyway"**.

Windows:

1. Run the downloaded `.exe` installer.
2. Follow the on-screen installation prompts.
3. Launch Antigravity from the Start menu or desktop shortcut.

Create a Project Folder

Before using Antigravity, create a folder called `eastd199` on your Desktop:

- **macOS**: Open Finder → go to Desktop → right-click → **New Folder** → name it `eastd199`.
- **Windows**: Open File Explorer → go to Desktop → right-click → **New** → **Folder** → name it `eastd199`.

First Launch Setup

When you open Antigravity for the first time, it walks you through a setup wizard:

1. **Welcome screen**: Click **Next** to proceed.

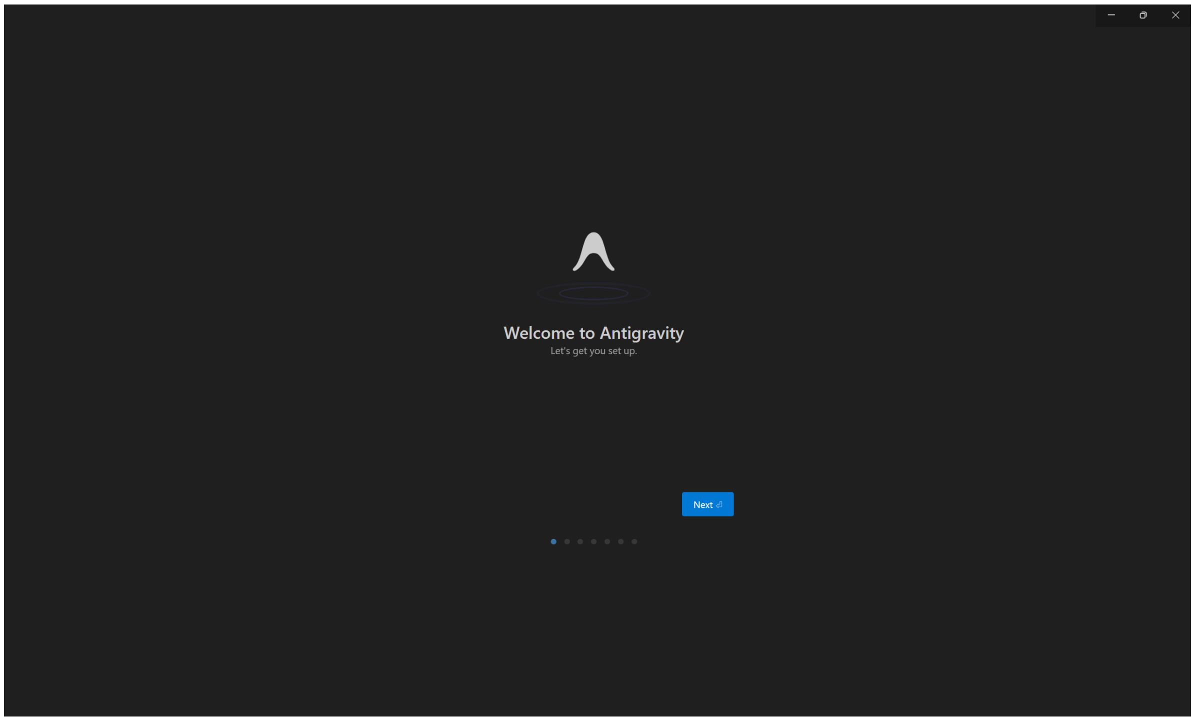
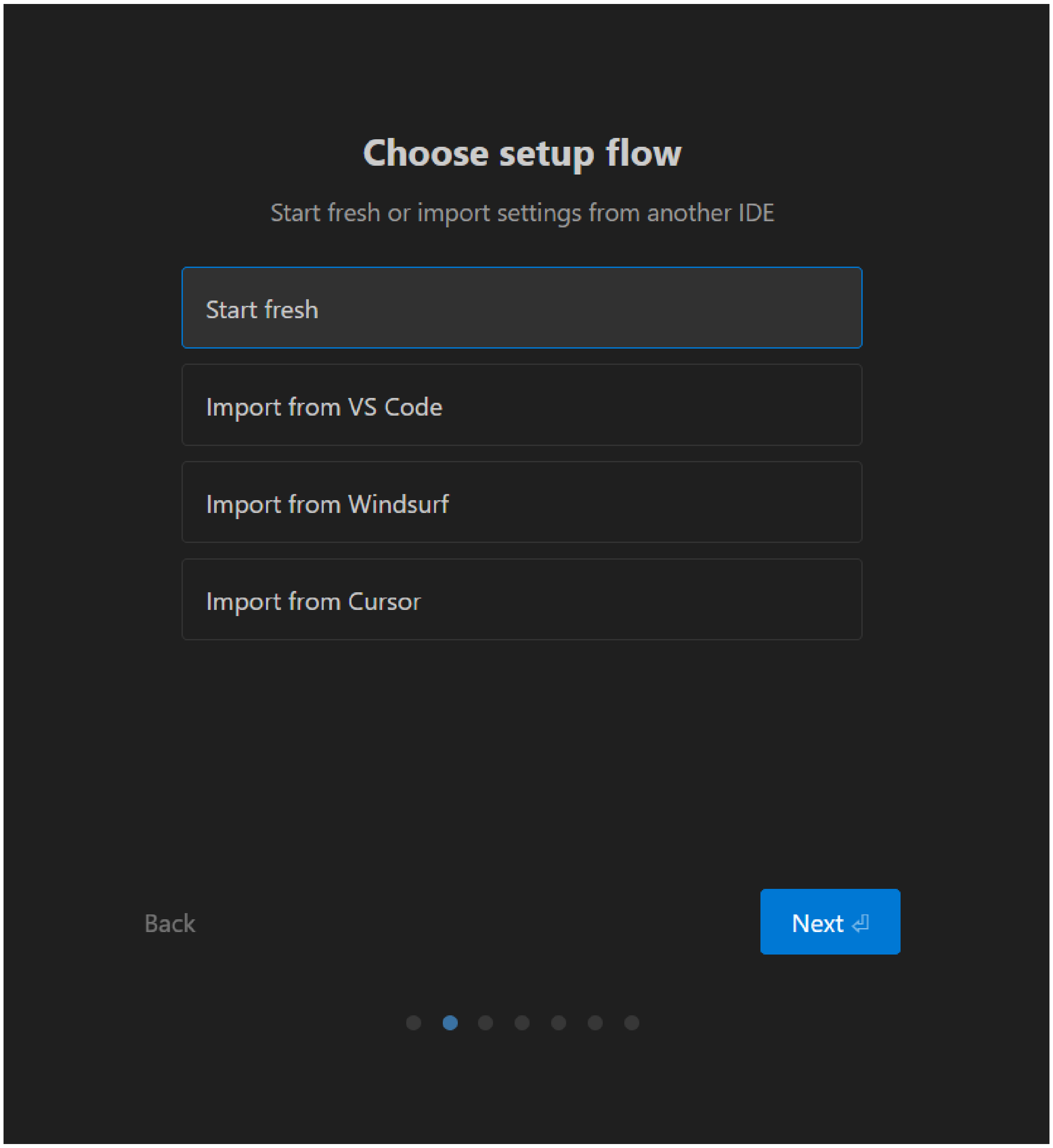


Figure 9: Welcome to Antigravity

2. **Choose setup flow**: Select **"Start fresh"** (unless you want to import settings from VS Code, Windsurf, or Cursor). Click **Next**.



Choose setup flow

Start fresh or import settings from another IDE

Figure 10: Choose setup flow

3. **Choose an editor theme**: Pick any theme you like. Click **Next**.

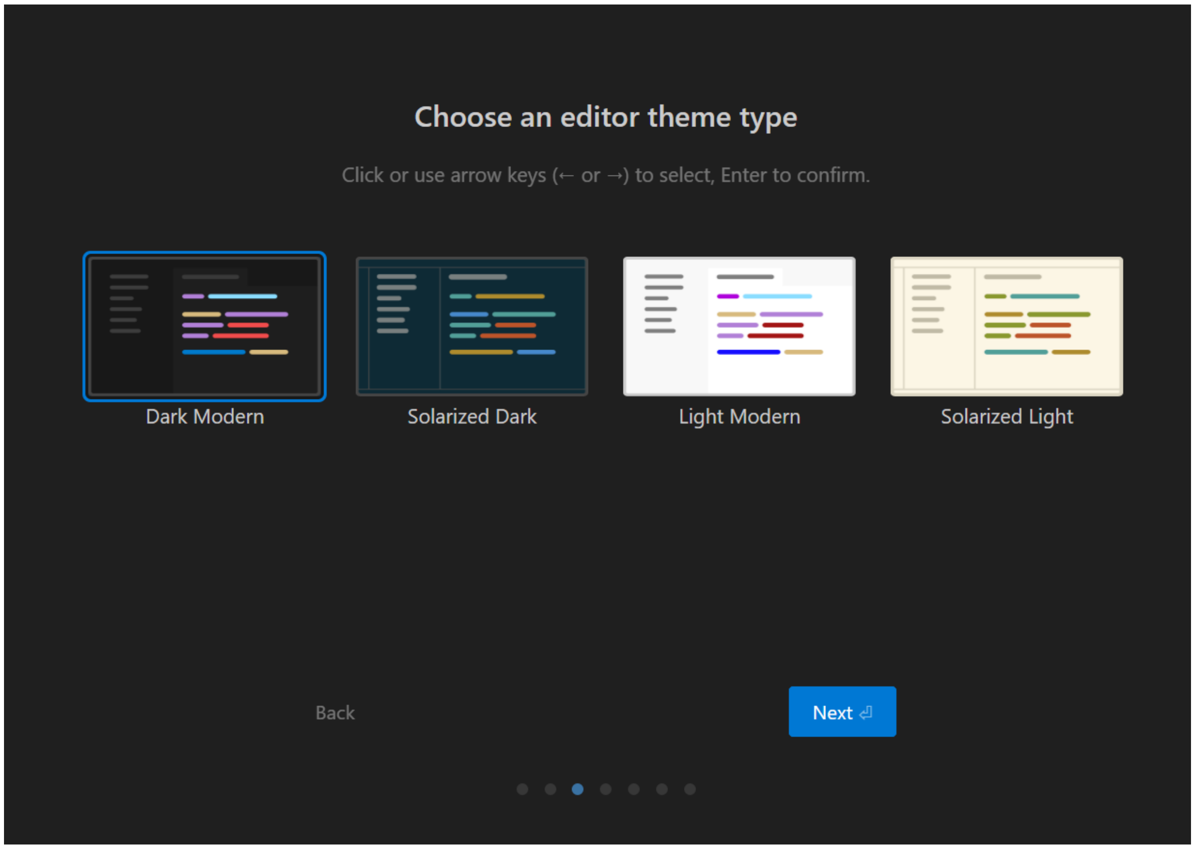
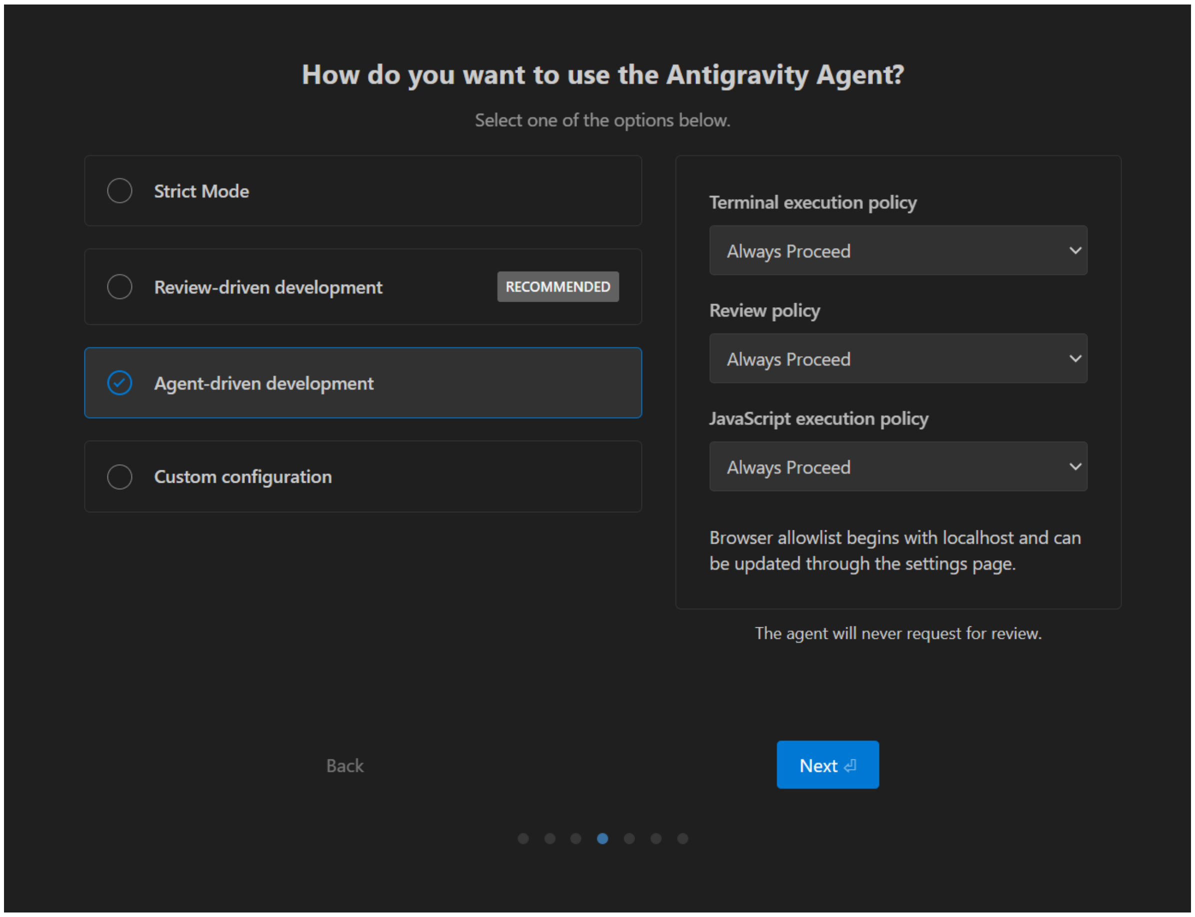

Choose an editor theme type
Click or use arrow keys (← or →) to select, Enter to confirm.
Dark Modern
Solarized Dark
Light Modern
Solarized Light
Back
Next ⏎

Figure 11: Choose an editor theme

4. **Choose agent mode**: Select **"Agent-driven development"** — this lets the AI agent execute commands and write files autonomously. Click **Next**.



How do you want to use the Antigravity Agent?

Select one of the options below.

- Strict Mode
- Review-driven development RECOMMENDED
- [✓ Agent-driven development]
- Custom configuration

Terminal execution policy: Always Proceed

Review policy: Always Proceed

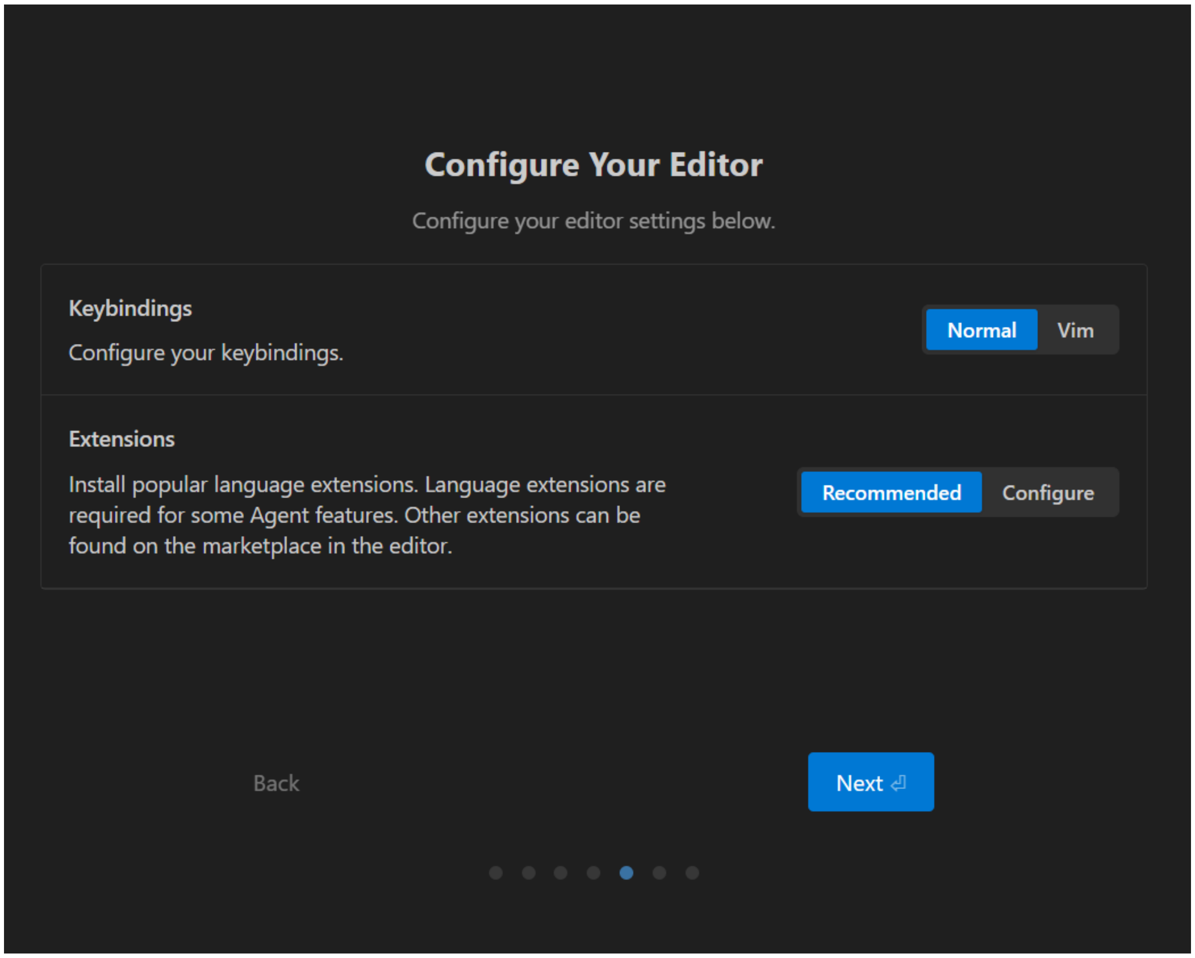
JavaScript execution policy: Always Proceed

Browser allowlist begins with localhost and can be updated through the settings page.

The agent will never request for review.

Figure 12: Select "Agent-driven development"

5. **Configure your editor**: Keep **Normal** keybindings and **Recommended** extensions. Click **Next**.



Configure Your Editor

Configure your editor settings below.

Keybindings

Configure your keybindings.

Extensions

Install popular language extensions. Language extensions are required for some Agent features. Other extensions can be found on the marketplace in the editor.

Figure 13: Configure editor

6. **Sign into Google**: Click **“Sign in with Google”** and log in with your Gmail account.

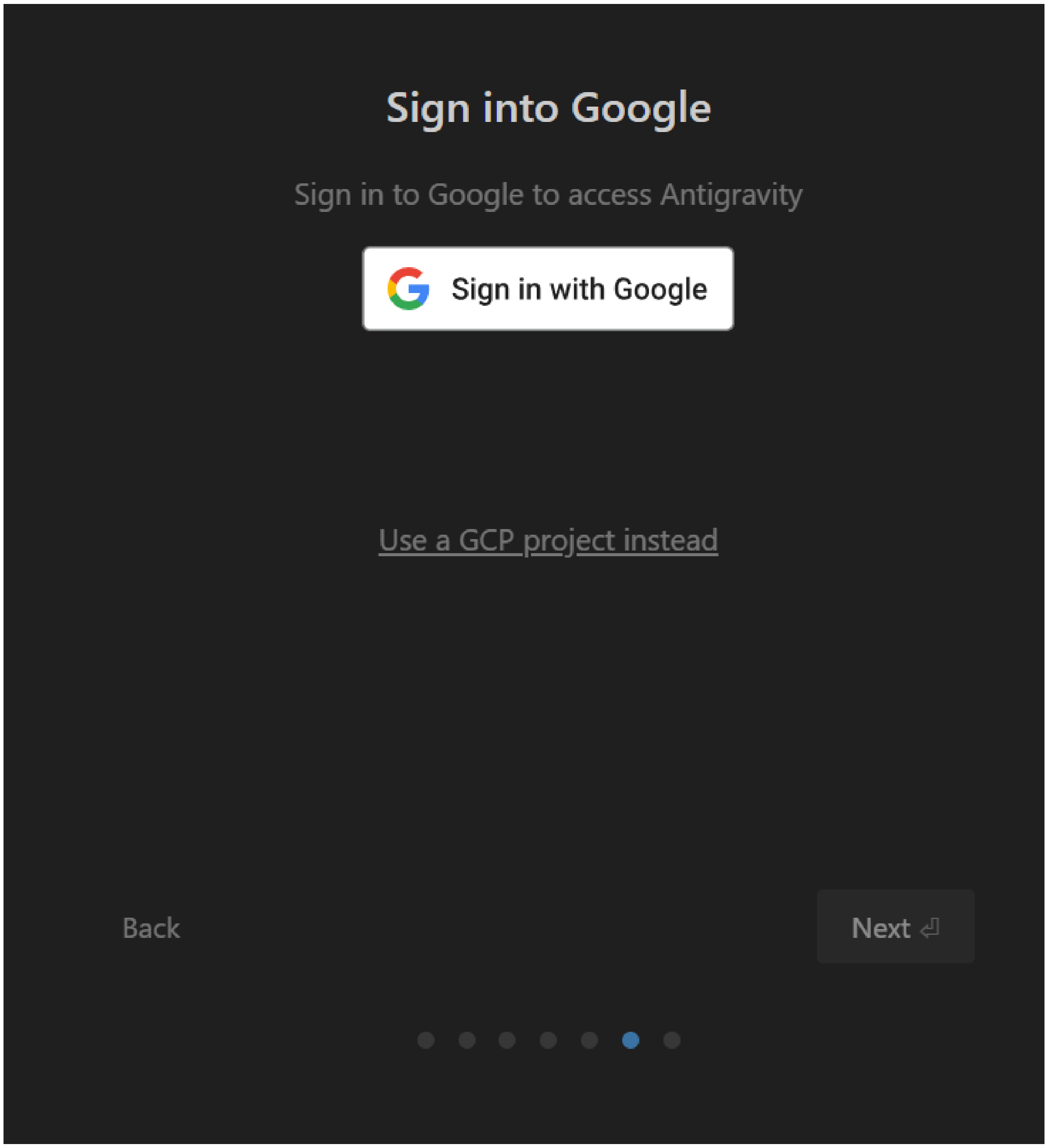
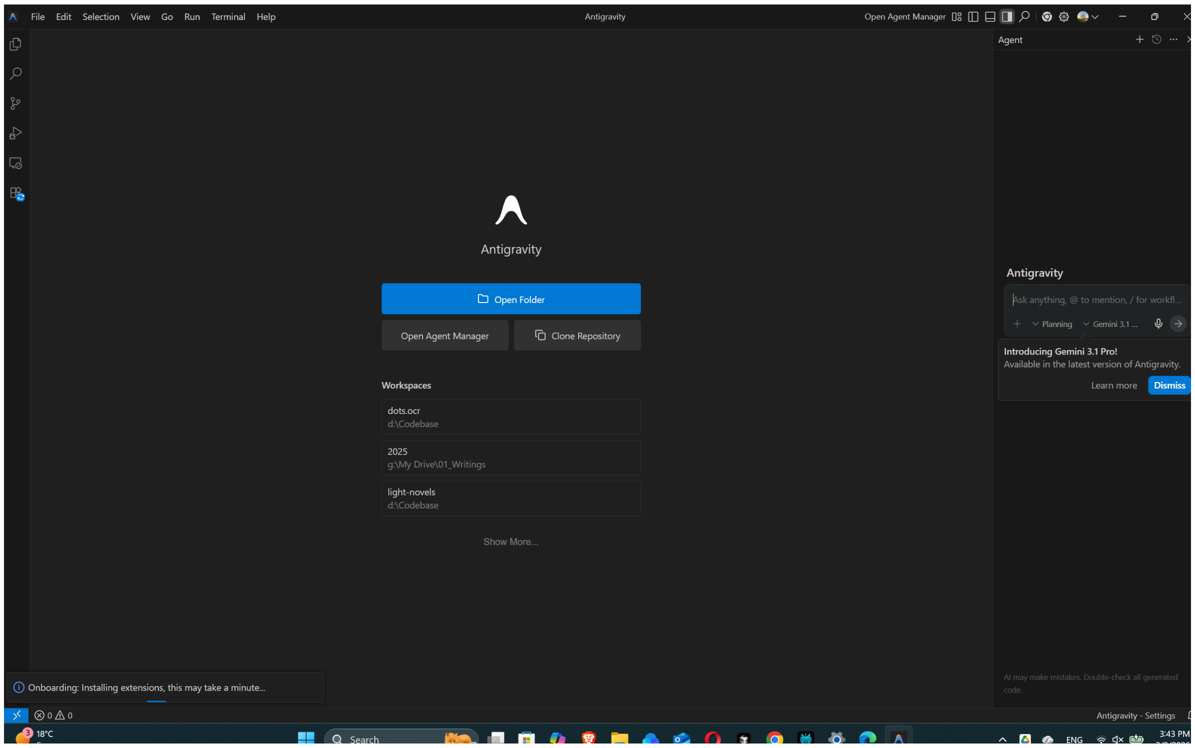

Sign into Google
Sign in to Google to access Antigravity
Sign in with Google
Use a GCP project instead
Back
Next ⏎

Figure 14: Sign in with Google

Getting Started

1. After sign-in, you will see the main Antigravity screen. Click **"Open Folder"** and select the `eastd199` folder on your Desktop.



Introducing Gemini 3.1 Pro!
Available in the latest version of Antigravity.

AI may make mistakes. Double-check all generated code.

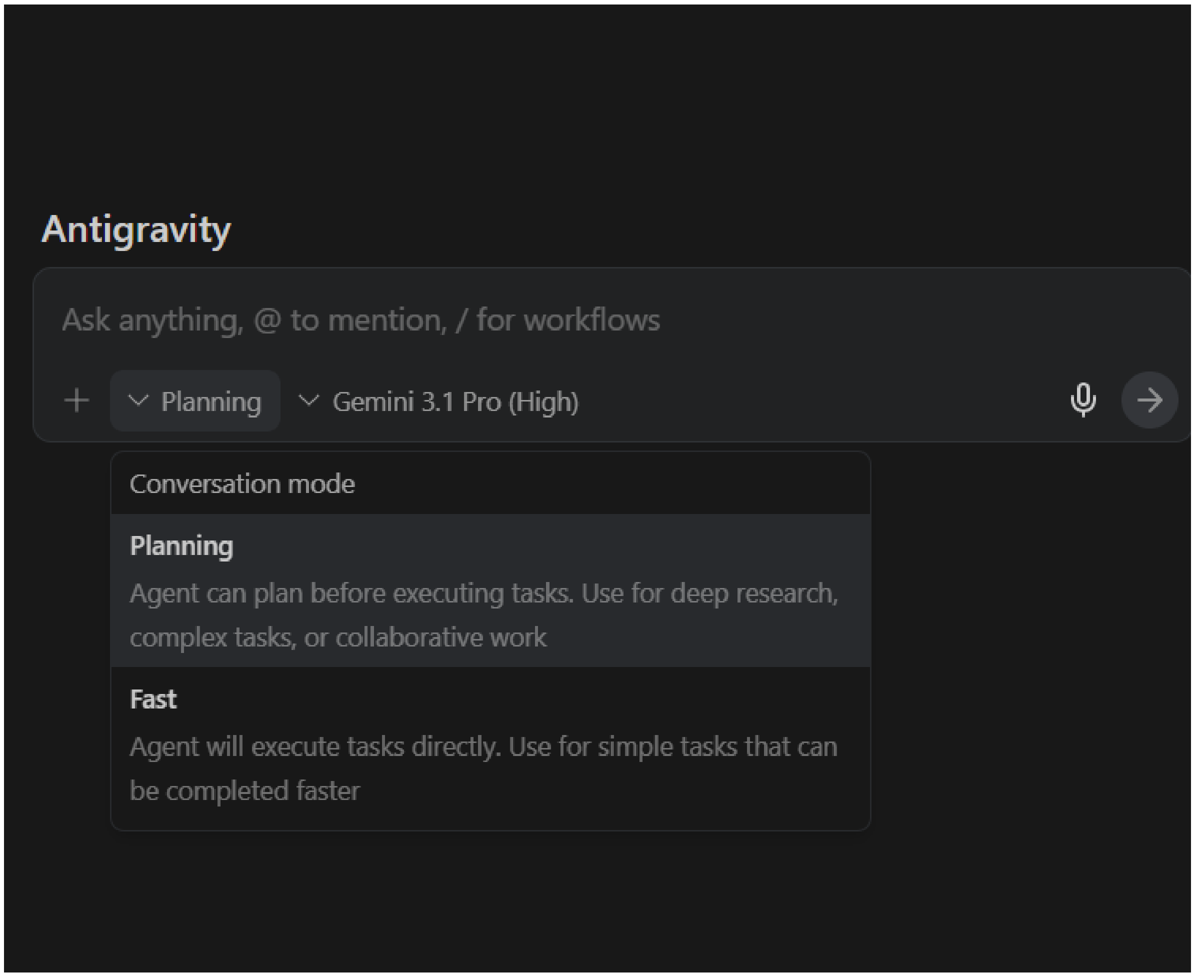
Onboarding: Installing extensions, this may take a minute...

Figure 15: Main screen — click "Open Folder"

❗ Important

Antigravity's AI features (including the terminal and chat panel) require an **open folder** to work properly. Always open a folder before using the AI chat or running terminal commands.

2. Open the AI chat panel with `Cmd+Shift+I` (macOS) or `Ctrl+Shift+I` (Windows/Linux). You can choose between **Planning** mode (complex tasks) and **Fast** mode (simple tasks).



Antigravity

Ask anything, @ to mention, / for workflows

Conversation mode

Planning
Agent can plan before executing tasks. Use for deep research, complex tasks, or collaborative work

Fast
Agent will execute tasks directly. Use for simple tasks that can be completed faster

Figure 16: Chat panel with Planning and Fast modes

3. Try a simple prompt to verify it works:

```
Hello! Can you create a simple HTML page that says "Hello, World!"?
```

Codex (Terminal Coding Agent)

Codex is an open-source coding agent by OpenAI that runs in your terminal. Your code stays on your machine; the AI reasoning happens in OpenAI's cloud.

Prerequisites

Requirement	Details
Node.js	Version 22 or higher
Account	A ChatGPT account (Plus, Pro, Business, Edu, or Enterprise) or an OpenAI API key

Install Node.js

- **macOS**: Download from https://nodejs.org or install via Homebrew:

```
brew install node
```

- **Windows**: Download the installer from https://nodejs.org. Make sure to check **"Add to PATH"** during installation.

Verify:

```
node --version
```

The output should be `v22.x.x` or higher.

Installation

Install Codex globally via npm:

```
npm install -g @openai/codex
```

> ❗ Important
>
> The package name is `@openai/codex` — **not** `codex`. The unscoped `codex` package on npm is an entirely different, unrelated tool.

Alternatively, on macOS:

```
brew install --cask codex
```

Authentication

Run Codex for the first time:

```
codex
```

You will be prompted to sign in with your ChatGPT account or provide an OpenAI API key. Codex is included with ChatGPT Plus, Pro, Business, Edu, and Enterprise plans.

> Tip
>
> As a Harvard student, you have access to ChatGPT Edu through Harvard. Go to https://www.huit.harvard.edu/openai-chatgpt-edu to activate your account. Once activated, you can use your Harvard ChatGPT Edu account to authenticate Codex.

Basic Usage

Navigate to a project folder and ask Codex to do something:

```
cd my-project
codex "Create an index.html file with a navigation bar linking to four pages"
```

Codex will show you what it plans to do and ask for confirmation before making changes.

> Tip
>
> Consider creating a Git commit before each Codex task so you can easily revert changes if needed:
>
> ```
> git add . && git commit -m "checkpoint before codex"
> ```

> Note
>
> **Windows users**: Codex works best on macOS and Linux. On Windows, the recommended approach is to use Codex inside **WSL** (Windows Subsystem for Linux).

Register a GitHub Account

GitHub is a cloud platform for hosting Git repositories. We use GitHub to host your personal website via GitHub Pages.

If you already have a GitHub account, skip to "Install Git and GitHub CLI" below.

Step 1: Sign Up

1. Go to https://github.com/signup.
2. Enter your **email address**, create a **password**, and choose a **username**.
    - Alternatively, click **"Continue with Google"** to use your Gmail account.
3. Complete the verification (CAPTCHA) to confirm you are human.
4. Click **"Create account"**.

> Tip
>
> Choose your username carefully — it will become part of your website URL: `https://your-username.github.io`. A short, professional username is recommended.

Step 2: Verify Your Email

GitHub will send a verification email to the address you provided. Open it and click the verification link. You must verify your email to access all GitHub features.

Step 3: Enable Two-Factor Authentication (2FA)

GitHub strongly recommends enabling 2FA for account security:

1. Go to https://github.com/settings/security.
2. Under **Two-factor authentication**, click **Enable**.
3. Follow the prompts to set up 2FA using an authenticator app (e.g., Google Authenticator, Microsoft Authenticator) or a passkey.

Step 4: Install Git and GitHub CLI

You need **Git** (version control) and **GitHub CLI** (`gh`, for interacting with GitHub from the terminal) installed on your computer.

Install Git

- **macOS**: Install via Xcode Command Line Tools:

```
xcode-select --install
```

- **Windows**: Download from https://git-scm.com/download/win or run:

```
winget install --id Git.Git
```

Verify:

```
git --version
```

Install GitHub CLI

- **macOS**:

```
brew install gh
```

- **Windows**:

```
winget install --id GitHub.cli
```

Verify:

```
gh --version
```

Authenticate GitHub CLI

```
gh auth login
```

Follow the prompts to authenticate with your GitHub account. This allows you to create repositories, push code, and manage GitHub from the terminal.

Step 5: Configure Git

Set your name and email for Git commits:

```
git config --global user.name "Your Name"
git config --global user.email "your-email@example.com"
```

> **!** Important
>
> Read the next section on **Git email privacy** before setting your email. You may want to use GitHub's private `noreply` email instead of your personal email.

Solving the Git Email Issue

When you make a commit, Git attaches an email address to it. By default, this is whatever email you configured with `git config`. If you push to a **public repository**, anyone can view your commit history and see your personal email address. This section walks you through how to **hide your real email** and use GitHub's private `noreply` email instead.

> **!** Important
>
> Your commit email is **permanently baked into the commit history**. Even if you change your email later, old commits will still show the old email. Set this up correctly **before** making more commits.

Step 1: Check Your Current Commit Email

```
git config --global user.email
```

If this shows your personal email (e.g., `yourname@gmail.com`), you should change it.

Step 2: Enable Email Privacy on GitHub

1. Go to https://github.com/settings/emails.
2. Scroll down and **check** the box labeled **"Keep my email addresses private"**.
3. GitHub will display your `noreply` email in the format:

```
ID+USERNAME@users.noreply.github.com
```

Copy this email — you will need it in the next step.

Step 3: Block Pushes That Expose Your Email

On the same settings page:

1. **Check** the box labeled **"Block command line pushes that expose my email"**.

This acts as a safety net — if you accidentally try to push a commit with your personal email, GitHub will reject it.

Step 4: Update Your Local Git Config

```
git config --global user.email "ID+USERNAME@users.noreply.github.com"
```

Replace `ID+USERNAME@users.noreply.github.com` with **your actual `noreply` email** from Step 2.

Verify:

```
git config --global user.email
```

Step 5: Verify with a Test Commit

1. Make a small change to any file in a repository.
2. Stage and commit:

```
git add .
git commit -m "Test commit with private email"
```

3. Check the commit email:

```
git log -1 --format='%ae'
```

If it shows your `noreply` email, you are all set.

4. Push to GitHub:

```
git push
```

If the push succeeds, your email privacy is correctly configured.

Step	Action	Where

Quick Reference

Step	Action	Where
1	Check current commit email	Terminal: `git config --global user.email`
2	Enable "Keep my email addresses private"	GitHub Email Settings
3	Enable "Block command line pushes that expose my email"	GitHub Email Settings
4	Set `noreply` email in Git config	Terminal: `git config --global user.email "..."`
5	Verify with a test commit	Terminal: `git log -1 --format='%ae'`

Tip

For more details, see the official GitHub documentation: Setting your commit email address.

Publishing to GitHub Pages

GitHub Pages lets you host a website directly from a GitHub repository — for free. Every push to your repository automatically updates your live website.

Step 1: Create the Repository

Your personal website must be hosted at `https://your-username.github.io`. GitHub Pages requires a repository with a specific name:

```
gh repo create your-username.github.io --public --clone
cd your-username.github.io
```

Replace `your-username` with your actual GitHub username.

! Important

The repository name **must** be exactly `your-username.github.io`. If it does not match your GitHub username, GitHub Pages will not deploy to the root URL.

Step 2: Create Your Website Files

Open the project in Antigravity:

```
code .
```

Create the following file structure:

```
your-username.github.io/
  index.html          (About Me - homepage)
  publications.html   (Publications page)
  projects.html       (Projects page)
  blog.html           (Blog page)
  style.css           (Shared stylesheet)
  .github/
      workflows/
          deploy.yml  (GitHub Actions workflow)
```

You can write these files yourself, or refer to Session 1 for AI prompts that generate everything at once.

Step 3: Preview Locally

Before deploying, preview your site in a browser:

- **macOS**: `open index.html`
- **Windows**: `start index.html`

Or use the **Live Server** extension in Antigravity: right-click `index.html` → **"Open with Live Server"**.

Step 4: Set Up GitHub Actions for Deployment

Create the workflow directory:

```
mkdir -p .github/workflows
```

Create the file `.github/workflows/deploy.yml` with the following content:

```
on:
  workflow_dispatch:
  push:
    branches: main

name: Deploy to GitHub Pages

permissions:
  contents: read
  pages: write
  id-token: write

jobs:
  deploy:
    runs-on: ubuntu-latest
    environment:
      name: github-pages
      url: ${{ steps.deployment.outputs.page_url }}
    steps:
      - name: Check out repository
        uses: actions/checkout@v4

      - name: Setup Pages
        uses: actions/configure-pages@v4

      - name: Upload artifact
        uses: actions/upload-pages-artifact@v3
        with:
          path: '.'

      - name: Deploy to GitHub Pages
        id: deployment
        uses: actions/deploy-pages@v4
```

Note

If you use a different framework (Quarto, Hugo, Jekyll), you will need a workflow with a build step. Ask Antigravity or Codex:

```
Create a GitHub Actions workflow to build and deploy
a [Quarto/Hugo/Jekyll] site to GitHub Pages.
```

Step 5: Commit and Push

```
git add .
git commit -m "Initial website with About, Publications, Projects, and Blog pages"
git branch -M main
git push -u origin main
```

Step 6: Enable GitHub Pages

1. Go to your repository on GitHub: `https://github.com/your-username/your-username.github.io`
2. Click **Settings** → **Pages** (in the left sidebar).
3. Under **Source**, select **GitHub Actions**.

Important

You must select **GitHub Actions** as the source, not "Deploy from a branch". This is because we are using a GitHub Actions workflow to deploy the site.

After the workflow completes (check progress under the **Actions** tab), your website will be live at:

`https://your-username.github.io`

Updating Your Website

Every time you want to update your website:

1. Edit your files in Antigravity (or use Codex).
2. Preview locally.
3. Commit and push:

```
git add .
git commit -m "Describe your changes"
git push
```

4. GitHub Actions automatically deploys the updated site.

GLM-OCR (Local OCR Tool)

GLM-OCR is a local OCR tool that uses the GLM-OCR model (a 0.9B parameter vision-language model) to convert scanned documents and images into structured Markdown with tables, formulas, and layout-aware text — all running locally on your machine.

- **macOS (Apple Silicon)**: Uses the MLX framework for fast local inference on the Metal GPU.
- **Windows**: Uses Ollama for local inference.

Both platforms share the same web interface and the same GLM-OCR model. The only difference is the inference backend. The launcher script automatically detects your operating system and uses the correct backend.

Prerequisites

macOS (Apple Silicon)

- **Apple Silicon Mac** (M1, M2, M3, or M4) — Intel Macs are **not** supported.
- **Python 3.12 or higher**: Download from python.org if not installed.
- **Git**: Install via Xcode Command Line Tools (`xcode-select --install`) or Homebrew (`brew install git`).
- **Disk space**: ~20 GB for model weights (downloaded automatically on first launch).
- **Memory**: 16 GB unified memory minimum; 32 GB+ recommended for multi-page PDFs.

Windows

- **Python 3.12 or higher**: Download from python.org. During installation, check **"Add Python to PATH"**.
- **Git**: Download from git-scm.com or install via `winget install --id Git.Git`.
- **Ollama**: The launcher will install it automatically if not found. Or install manually from ollama.com.
- **Disk space**: ~5 GB for the Ollama model + layout detection weights.
- **GPU (optional)**: An NVIDIA GPU with CUDA support speeds up inference. Ollama also works on CPU, but will be slower.

Installation and Launch

1. Clone the repository:

```
git clone https://github.com/fccs-dci/glm-ocr-mlx.git
```

2. Launch:

   - **macOS**: Double-click `launch.command` in Finder.
     - If macOS blocks it: right-click → **Open** → confirm in the dialog.
   - **Windows**: Double-click `launch.bat`.

3. On **first run**, the launcher automatically:

   - Creates a Python virtual environment and installs dependencies
   - Downloads model weights (macOS: from Hugging Face ~20 GB; Windows: via Ollama ~5 GB)
   - Installs Ollama if needed (Windows only)

4. The web UI opens automatically in your browser at `http://localhost:5003`.

5. **Keep the terminal/command prompt open.** Press `Ctrl+C` to stop when done.

Note

After the first run, subsequent launches are much faster because the virtual environment, model weights, and dependencies are already in place.

Using the Web UI

1. **Upload**: Drag and drop a PDF, PNG, or JPEG onto the upload area — or click to browse.
2. **Processing**: A progress bar shows real-time status. PDFs are split into page images, then each page is OCR'd sequentially.
3. **Review Results**: A split-panel view shows the original document on the left and the rendered Markdown on the right.
4. **Export**: Click **Export** to download results as Markdown (`.md`) or JSON (`.json`).

Troubleshooting

Problem	Solution
macOS blocks `launch.command`	Right-click → **Open** → confirm
"Python 3.12 or higher is required"	Install latest Python from python.org
First scan is very slow	Normal — model loads into memory on first request
Out of memory (macOS)	Close other apps; 16 GB minimum, 8 GB Macs may struggle
Ollama fails to start (Windows)	Check if port 11434 is in use; restart computer
Model pull fails (Windows)	Check internet; manually run `ollama pull glm-ocr:latest`

! Important

Do **not** update Ollama beyond version 0.17.0 on Windows — newer versions may have compatibility issues with GLM-OCR.