

 STUDENT STARTUP CENTER (SSC) × IEEE STUDENT BRANCH

SKILLBUILDER SERIES · SESSION 1 OF 2

Vibecoding 1

Antigravity IDE Kickstart

Build real web apps with AI assistance — fast


Dr. Alfredo Costilla Reyes · UC Davis · April 22, 2026


Today's Roadmap


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 **0:00** **Intro & Vibecoding** — what, why, mindset

 **0:10** **Part 1 — Antigravity IDE** — setup & first prompt

 **0:25** **Part 2 — Hands-on Build** — vibe-code a React + Tailwind app

 **0:40** **Part 3 — Local Git** — save your work with version control

 **0:55** **Wrap-up** — next steps & independent practice

SESSION INFO

Duration: 60 minutes

Format: Demo + Hands-on

Teams: Solo or pairs

WHAT YOU NEED

Laptop with Wi-Fi

Google account (for Antigravity)

Web browser

What is Vibecoding?

A term coined by **Andrej Karpathy** — co-founder of OpenAI, former Tesla AI Director.

CORE IDEA

You **describe what you want** in plain language. The AI writes the code. You **vibe** with it — steer, refine, ship.

WHAT CHANGES?

- You think in *outcomes*, not syntax
- Iteration is measured in **seconds**
- Anyone can build — not just CS majors
- Git keeps your work organized + versioned



You describe it

"Make a webcam app that counts people"



AI writes the code

Antigravity generates Python + YOLO



You ship it

Save with git — it's versioned

✔ Step 0 — Prerequisites Check

- 1 Laptop + Wi-Fi**
Connect to eduroam or event Wi-Fi
- 2 Antigravity IDE**
Download from [antigravity.google](https://antigravity.google.com)
Desktop app only — Mac, Windows, or Linux
- 3 Google Account**
Sign in to unlock AI features
- 4 Git (we'll use this later)**
Mac: `git --version` in Terminal
Windows: install Git Bash

☰ READY WHEN YOU CAN:

- ✓ Antigravity IDE installed and open
- ✓ Signed in with Google account
- ✓ Chat panel visible on the left sidebar

i Can't run Antigravity? Use aistudio.google.com as an alternative — same Gemini AI, works in any browser.

📶 Having trouble connecting? Ask for the event hotspot password.

BUILT BY GOOGLE

Antigravity is Google's AI-first coding environment — VS Code base with Gemini models integrated throughout.

What makes it different:

- ✦ **Inline AI chat** — ask questions about your own code, in context
- ✦ **Code generation** — describe a function, get working code instantly
- ✦ **Auto-complete** — AI suggests entire blocks as you type
- ✦ **Terminal integration** — run and debug without leaving the editor
- ✦ **Git integration** — version control built in



Antigravity IDE

antigravity.google


VS Code + Gemini AI

No account needed for basic use
Desktop app — Mac, Windows, Linux

Free

Google-powered

Cross-platform


 Already use VS Code? Install the **Gemini Code Assist** extension — same AI, your existing setup.

Setup steps:

- 1** Go to antigravity.google
Download and install the desktop app
- 2** Sign in with your Google account
Unlocks AI features + saves your workspace
- 3** Create a new project folder
File → Open Folder → pick or create a folder
- 4** Open the **Chat panel** (left sidebar or `Ctrl+Shift+I`)
This is where the vibecoding magic happens
- 5** Type your first prompt → press Enter
Try: "Create a Python script that prints Hello World"

READY WHEN YOU CAN:

- ✓ Antigravity IDE open in browser or desktop
- ✓ Chat panel visible on the left
- ✓ You've typed one prompt and seen a response

 Accept or reject AI suggestions — **you stay in control**. Review code before running.

🗨️ Antigravity — Prompts & Shortcuts

🗨️ STARTER PROMPT

Copy this template and fill in the blank:

"Create a React and Tailwind CSS web application with a Tinder-like swipe interface that matches _____. Include card profiles, swipe left to skip, swipe right to match, and a matches list page."

Fill-in ideas: bike riders with local rides

dog owners for playdates

students for study groups

foodies for lunch meetups

💡 **Tip:** After the initial app generates, ask follow-up prompts like *"Add animations to the swipe cards"* or *"Make it mobile responsive"*.

🗂️ KEY SHORTCUTS

Tab — accept inline suggestion

Ctrl+I — inline code edit prompt

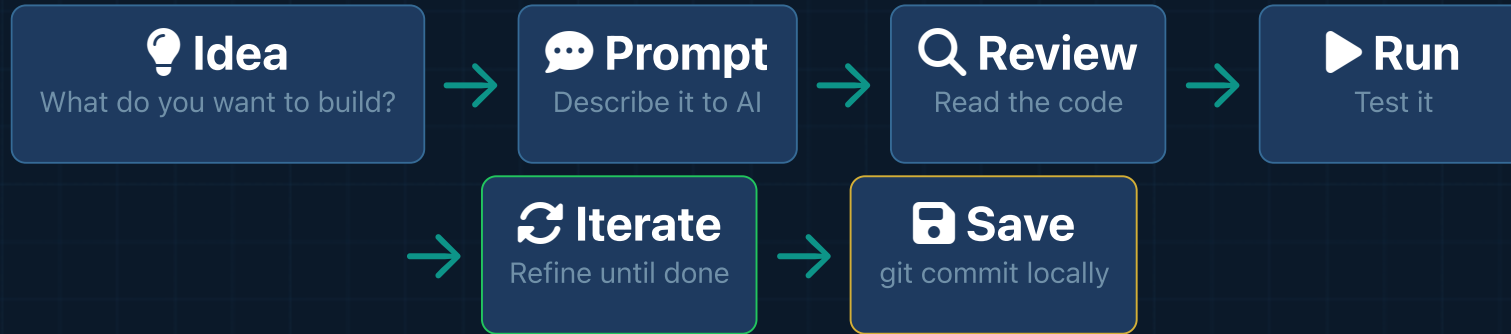
Ctrl+Shift+I — open chat panel

Esc — dismiss suggestion

📌 ALREADY USE VS CODE?

Install the **Gemini Code Assist** extension — same AI, your existing setup.

The Vibecoding Loop



This loop is the core of vibecoding. Each cycle takes **seconds**, not hours.

PROMPT → CODE

Be specific. Include language, expected input/output, constraints.

"Python function, takes a list of ints, returns the average as float"

REVIEW → TRUST


Don't blindly run AI code. Skim for:

- File paths that look wrong
- Network calls you didn't ask for
- Imports you don't recognize

COMMIT OFTEN

Commit every time something works. Tiny snapshots = easy recovery.

```
$ git add . && git  
commit -m "working  
v1"  
  
# saves locally –  
no internet needed
```

 **Stuck?** Ask the AI: *"Why is this not working? Here's the error: [paste error]"*

Part 2 — Pick Your Project

Pick a matching concept. Vibe-code it with React + Tailwind CSS.

OPTION A — RIDES

Bike Ride Matcher

Prompt: *"React + Tailwind app that matches bike riders with rides in their area"*

OPTION B — PETS

Dog Owner Meetups

Prompt: *"React + Tailwind app that connects dog owners nearby for playdates"*

OPTION C — FOOD

Lunch Buddy Finder

Prompt: *"React + Tailwind app that matches people who want to grab lunch together"*

OPTION D — YOURS

Your matching idea

Pick any concept — the AI builds the Tinder-style swipe UI for you!

🕒 20-Min Build Sprint

🕒 SPRINT BREAKDOWN

- 5m Open Antigravity + create new file
- 10m Prompt → iterate → get it working
- 5m Save your progress with git commit

💡 **Stuck?** Ask the AI: *"Why is this not working? Here's the error: [paste error]"*

GOAL

- ✓ Code runs without crashing
- ✓ Saved with at least 3 git commits
- ✓ At least 3 commits in history

🕒 **Time check:** Focus on getting the core swipe UI working first. Polish later!

WHAT IS GIT?

Git — a version control tool that runs on your machine. It tracks every change to every file. Think of it as **unlimited undo** for your entire project.

WHY USE GIT WITH VIBECODING?

- AI-generated code changes fast — Git saves every version
- Revert if the AI breaks something
- Track what works vs. what doesn't
- Later: push to the cloud to share

GIT LIFECYCLE (LOCAL)

 **Working Directory**
your files on disk

`git add .` ↓

 **Staging Area**
changes queued

`git commit -m "..."` ↓

 **Local Repository**
saved snapshot — safe forever

> Essential Git Commands

The 4 commands you need today:

```
$ git init          # start
tracking a folder
$ git add .        # stage all
changes
$ git commit -m "msg" # save snapshot
$ git status       # see what
changed
```

💡 **Good commit messages:** "Add swipe UI component" not just "update"

HANDS-ON — INIT YOUR PROJECT

```
$ cd my-project
$ git init
$ git add .
$ git commit -m "initial
commit"
```

CHECKPOINT

- ✓ git log shows your commit
- ✓ Keep committing as you iterate!



Independent Practice — Take It Further


After this session, complete these steps on your own:

- 1 Create a GitHub account (free)**
Pro access with your UC Davis email!
- 2 Create a new repository**
Upload your project from today
- 3 Push your local code to GitHub**
Connect your local git to the cloud
- 4 Enable GitHub Pages**
Deploy your React app as a live website

WHAT IS GITHUB?

GitHub = cloud hosting for your Git repos. Think Google Drive for code, but with version control + collaboration.

Your GitHub profile is your **engineering portfolio** — recruiters look at it.

 The next 3 slides walk you through each step in detail.

Step 1 — Create Your GitHub Account

- 1 Go to github.com/join
- 2 Sign up with your **UC Davis email** (@ucdavis.edu)
- 3 Verify your email address
- 4 Complete your profile — add a photo and bio

★ GET GITHUB PRO — FREE!


Go to education.github.com/pack

Sign in with your **@ucdavis.edu** email to get:

- GitHub Pro (unlimited private repos)
- Free Copilot access
- Free cloud credits & dev tools

PROFILE TIPS

- Add a profile picture + bio
- Pin your best repos on your profile
- Write clear README files
- Add topics/tags (e.g. "react", "ai")

 A pinned GitHub repo is worth more than a GPA on a tech resume.

Step 2 — Create a Repo & Push Your Code

On GitHub.com:

- 1 Click + → **New repository**
- 2 Name it (e.g. `swipe-matcher`)
- 3 Select **Public** — do NOT add README (you have one)
- 4 Click **Create repository**

Then in your terminal:

```
# Connect local repo to GitHub
$ git remote add origin
https://github.com/YOU/swipe-
matcher.git
$ git push -u origin main
```

CHECKPOINT

- ✓ Your code is visible at `github.com/YOU/swipe-matcher`
- ✓ README shows on the repo page
- ✓ Commit history shows your work

FUTURE UPDATES

```
$ git add .
$ git commit -m "add swipe
animations"
$ git push
```



Step 3 — Deploy with GitHub Pages

Enable GitHub Pages:

- 1 Go to your repo on GitHub
- 2 Click **Settings** (top menu)
- 3 Scroll to **Pages** (left sidebar)
- 4 Under Source, select **Deploy from a branch**
- 5 Select **main** branch → **/ (root)** → Save
- 6 Wait 1-2 minutes → your site is live!

YOUR LIVE URL

`YOUR-NAME.github.io/swipe-matcher`

Share this link with friends, put it on your resume!

i FOR REACT APPS

React apps need a build step. In your project:

```
$ npm run build
```

Then deploy the `build/` or `dist/` folder. Or use the GitHub Actions workflow that Antigravity can generate for you.

💡 Pro tip: Ask Antigravity: "Add a GitHub Pages deployment workflow to this project"

DONE WHEN:

- ✓ Your app loads at the GitHub Pages URL
- ✓ You can share the link with anyone

👤 INSTRUCTOR

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🌐 eng108.ai

ENG 108 — AI-Powered Innovation & Entrepreneurship

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Every project you build is a step toward your career.

Keep vibecoding. Keep shipping.

Resources:

- 🔗 antigravity.google — Antigravity IDE
- 🔗 aistudio.google.com — AI alternative
- 🔗 github.com/join — GitHub account
- 🔗 eng108.ai — Course info

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