Tutorial & Assignment Week 6 — Claude Code and Codex

Goals: Use a coding agent to build something useful or explore an advanced feature!

Due: Submit the indicated portions on Gradescope by Sunday Nov. 1st at 11:59pm, and be ready to discuss with your TA during tutorial in Week 7.

Hi all! We will start by meeting classmates with related project interests, then give you time to build with Claude Code or Codex. If you already use these tools, choose an advanced feature you haven't tried before.

Our tech talk will use Piper's running app to show how a coding agent moves from a request to changes in files and a working result. This week, you will try that process yourself and check one part of what you made.

Assignment outline:

This document is intended to be started in tutorial and completed for homework if necessary. Work through it in the order given.

- Meet classmates with related project interests
- Build a website or apply an advanced feature to a concrete task
- Determine what went wrong
- Submit a short account of your exploration and a reflection

Part 1: Tutorial group work

Group Activity 1 — Find your mini squad

Choose your favorite idea (or two!) and spend about 10 minutes adding yourself to our shared project-interest slide deck and meeting people with related interests. The deck is organized by broad realms, with an "Other / still exploring" slide if you aren't sure where to start.

For example: *Piper — running and fitness — interested in making Garmin/Strava data more useful — open to chatting!*

Deck: CS193 Project Squad Finding

Add your name, tutorial and something you're interested in. You may also add a possible project idea and your email or preferred contact information. If you see someone in your tutorial adding to the same idea, you're welcome to go talk to them!

Keep using the deck after tutorial! You can update your idea or reach out to classmates throughout the project. Adding your name expresses interest; it does not commit you to an idea or a group.

Deliverable: You don't need to submit anything for this portion of the assignment.

Part 2: Individual AI tool work

Use Claude Code or Codex to try one of the options below. If you're new to coding agents, start with the website option. If you already use them comfortably, choose an advanced feature that is new to you. Apply it to something concrete that you would actually find useful; it can relate to your final project, but it doesn't have to.

Before starting, decide: What do you want to make or do, and what would a working result look like? Use the tool to work with project files and run what you make. A regular chat that only gives you suggested code is not the same experience.

Option 1 — Build a website

Beginner; Claude Code or Codex. Choose something you'd like to have: a personal homepage, a project site, or a page for a club or event. Use the tool to build it, try running it locally, and make changes through conversation.

Option 2 — Build a custom skill

Claude Code or Codex. Create a reusable procedure for a task related to your interests. Include instructions and supporting materials, such as a template, reference document, or script, then apply it to a real task. For example, make a skill for processing activity exports or preparing files in a format your project needs.

Option 3 — Create specialist subagents

Claude Code or Codex. Design agents with different responsibilities, such as exploring a codebase, implementing a feature, and reviewing changes. Give them a concrete task and figure out how to divide the work and pass information between them. Pay attention to your role as the conductor of their work.

Option 4 — Make a rule executable with hooks

Claude Code. Configure an action that runs automatically at a particular point in the agent's work. For example, validate generated data after an edit or run a required check when Claude tries to finish. Choose a rule that matters for your task and demonstrate the hook running.

Option 5 — Give your agent a new tool through MCP

Claude Code or Codex. Build a small Model Context Protocol (MCP) server that connects the agent to information or actions relevant to your project, such as querying a database or searching a local collection. Use the new tool to accomplish something concrete.

Option 6 — Explore parallel approaches with worktrees

Codex; requires a Git project. Give separate agent conversations their own copies of a project, then have them pursue different approaches to the same feature. Act as the conductor: inspect the results and decide which approach you want to continue.

Deliverable, all copy and pasted into Gradescope:

1. Name the tool and concrete task you chose.
2. Copy and paste your opening prompt.
3. Write a short paragraph explaining what you tried, what you made or changed, and one thing you noticed about how the agent worked.

Part 3: Non-AI tool work

What went wrong?

As you work, keep track of something that went wrong or surprised you. What did you expect, and what actually happened? We'll use these examples next week to guide our work on evaluating AI tools.

Deliverable, in a 4-6 sentence paragraph copied and pasted into Gradescope:

1. Include a failure, unexpected result, or surprise you found while working with your coding agent. If everything seemed to work, identify something you have not yet checked.

Part 4: Reflection — Building and directing

Write one short paragraph, approximately 4–6 sentences, responding to at least one of the mini questions below about what happened when you began using an agent:

What did you need to understand or decide yourself while the agent worked? When did you feel like the builder, and when did you feel like a conductor directing the work? If someone else began relying on what you made, what would you want to understand, check, or maintain before feeling comfortable sharing it?

Deliverable: Copy and paste your reflection into Gradescope.

Submission

You should have three items to submit to Gradescope. Be ready to discuss these with your TA next week:

1. Your exploration account, including your tool, task, and opening prompt. Also include what you tried/changed.
2. A failure or unexpected result you saw when working with your agent.
3. Your reflection!