

“Brownfield” Vibe Coding Activity

17-316/616 Fall 2025

AI Tools for Software Development

<https://ai-developer-tools.github.io>

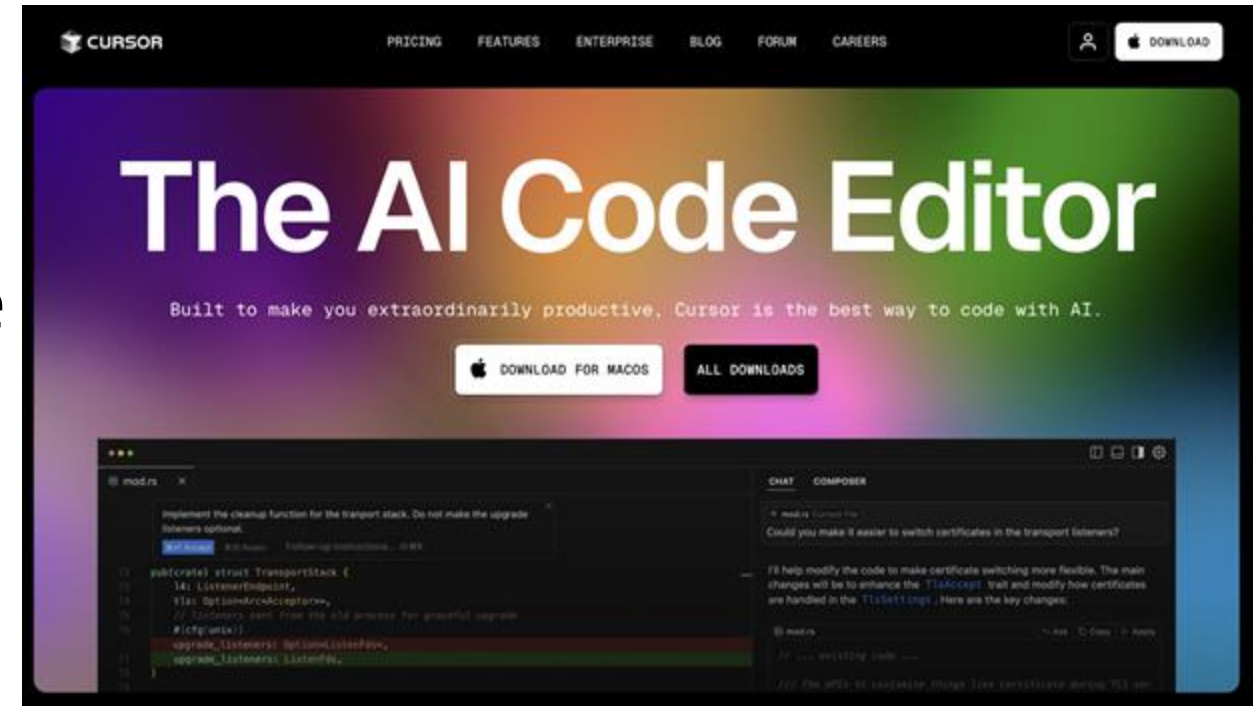
Austin Henley and Andrew Begel

Reflection

- Sign up by TODAY!!!
- Due next Tuesday night

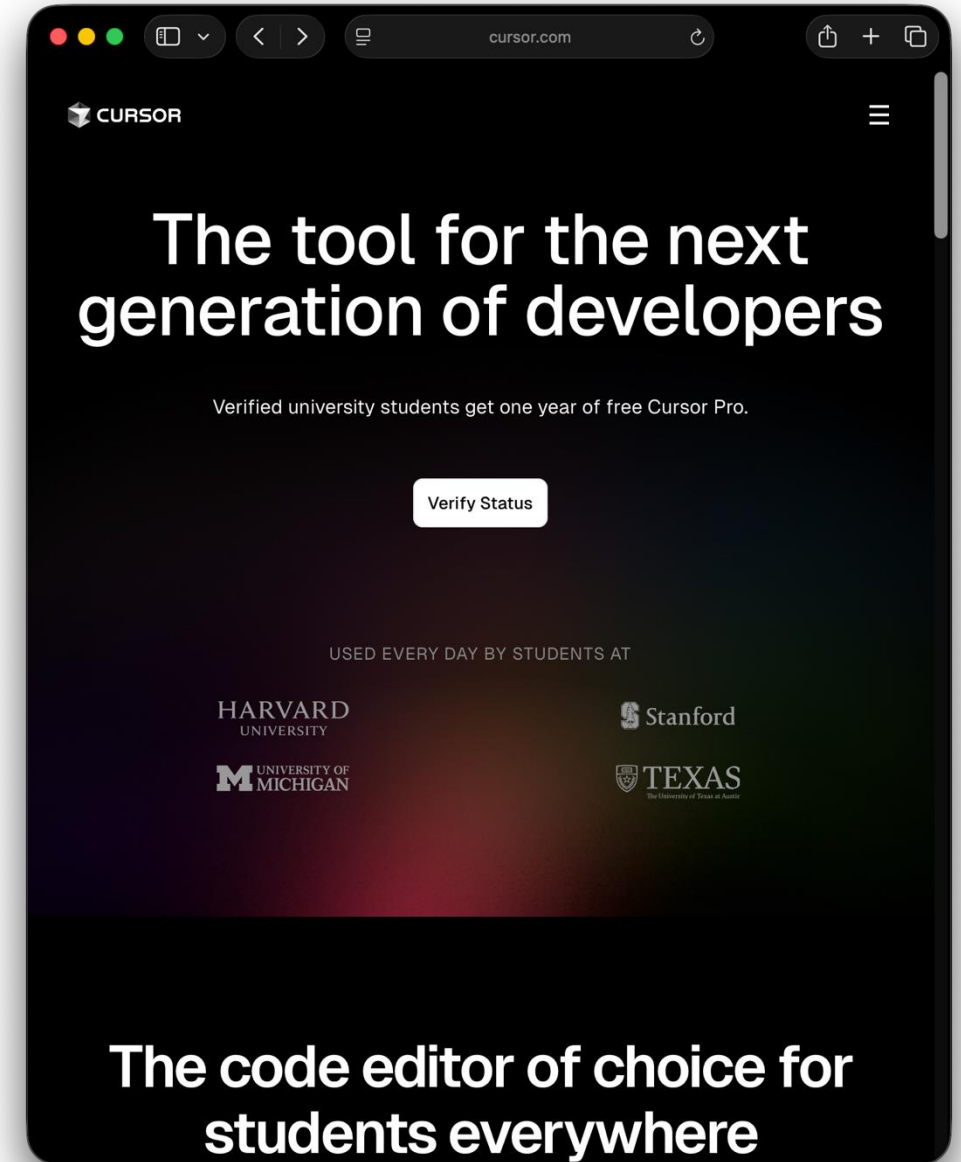
New students

- <https://cursor.com>
- Make a free Cursor account
- Download and install Cursor
- Also join Slack!
- Check out the course website

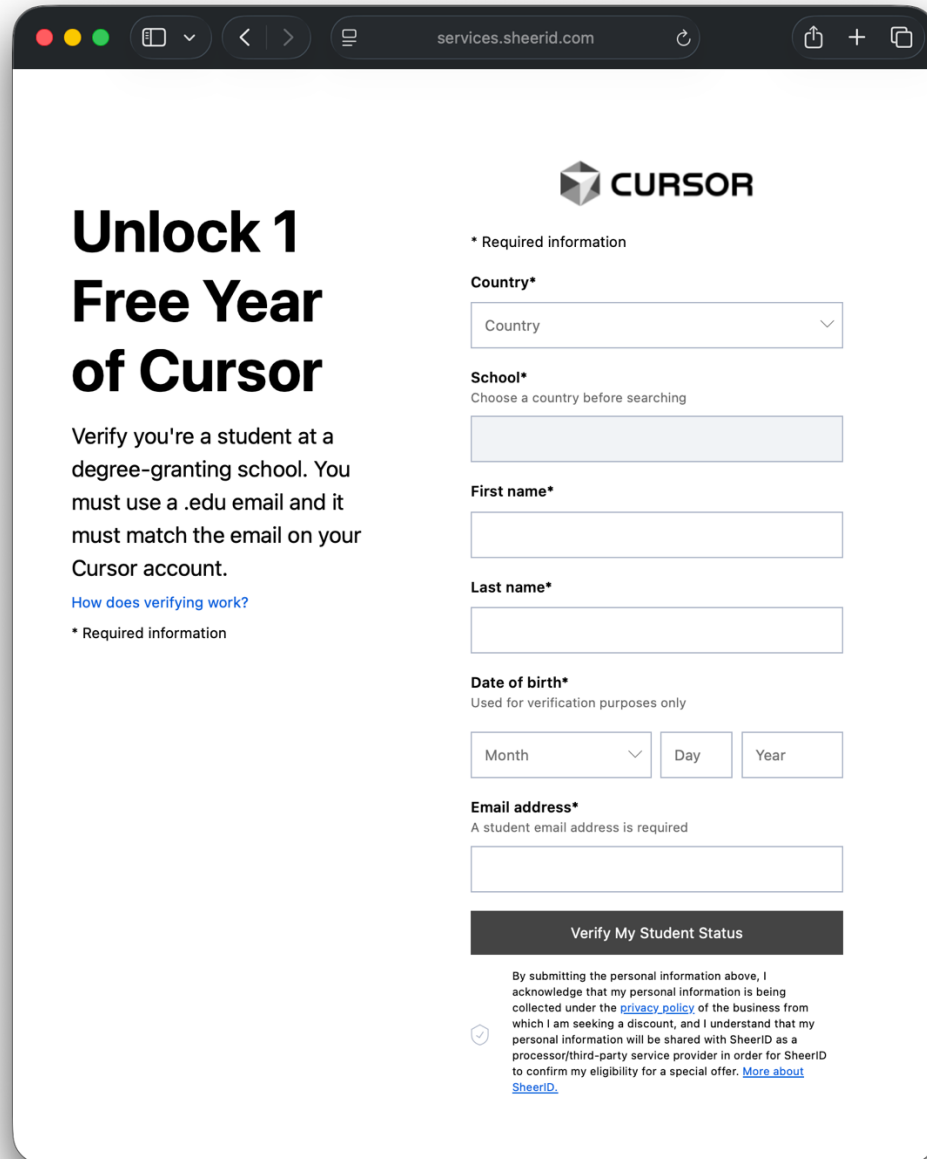


Cursor for students

- Free "pro" Cursor account for students
- <https://cursor.com/students>



Also requires photo of your student id...



The screenshot shows a web browser window with the URL `services.sheerid.com`. The page is titled "Unlock 1 Free Year of Cursor" and includes a form for student verification. The form fields are: Country (dropdown), School (text input with a note "Choose a country before searching"), First name (text input), Last name (text input), Date of birth (Month, Day, and Year dropdowns), and Email address (text input with a note "A student email address is required"). A "Verify My Student Status" button is at the bottom of the form. Below the button is a disclaimer about data collection and sharing, with links to "privacy policy" and "More about SheerID".

CURSOR

* Required information

Country*

Country

School*

Choose a country before searching

First name*

Last name*

Date of birth*

Used for verification purposes only

Month Day Year

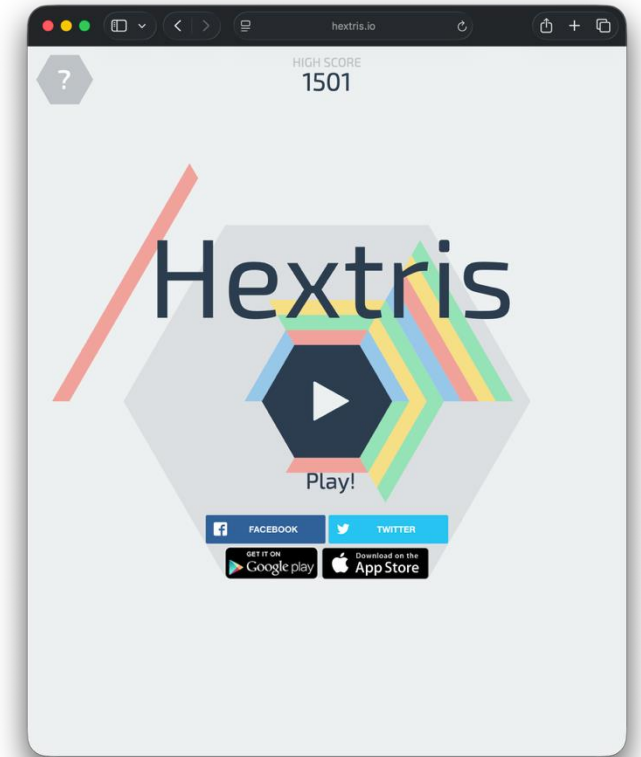
Email address*

A student email address is required

Verify My Student Status

By submitting the personal information above, I acknowledge that my personal information is being collected under the [privacy policy](#) of the business from which I am seeking a discount, and I understand that my personal information will be shared with SheerID as a processor/third-party service provider in order for SheerID to confirm my eligibility for a special offer. [More about SheerID](#).

Shall we play a game?
<https://hextris.io>



Activity: Vibe coding new features for an existing project

- We are going to use Cursor to “vibe code”
- Work individually (feel free to talk or ask questions)
- **Rely on the AI as much as possible**
- Don't write any code yourself... that is what the AI is for!
- We also want to understand how it works this time
- Cursor can help you setup your dev environment too

Task #1: Understanding the existing codebase

- Use Cursor to understand how Hextris works
- Ask it to generate documentation or diagrams
- Explain it to another student near you using the docs
- Is it good? Correct? Useful? Comprehensive?
- Now swap and let them explain to you

Task #2: Add another color block

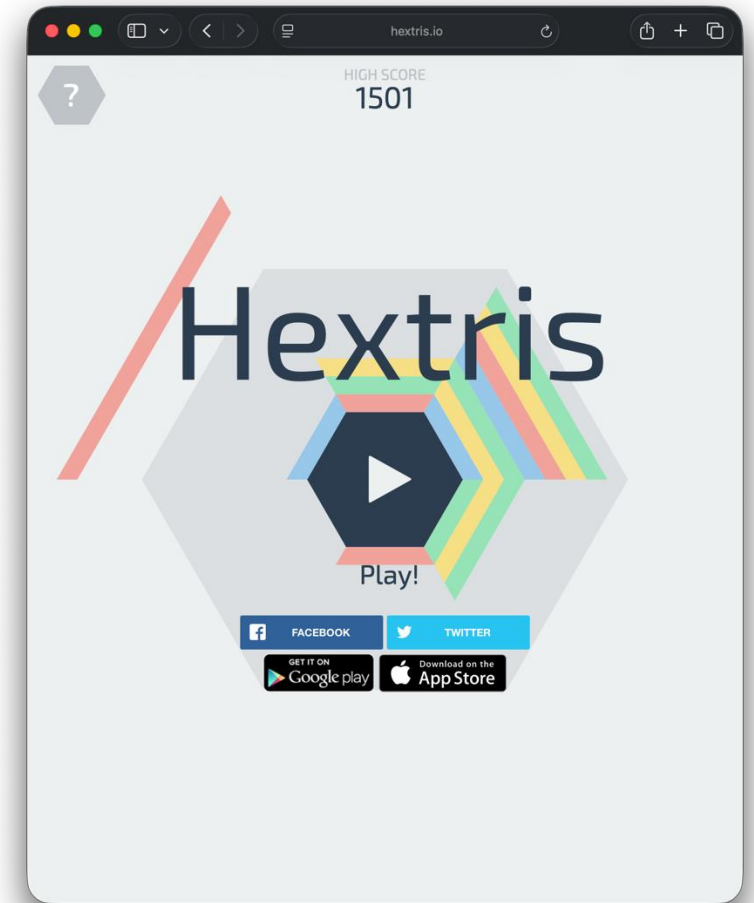
- The game is too easy... another color will increase the difficulty
- Can you understand the change?
- Test it... did it work correctly?

Logistics

- No class Monday
- Reflection due Tuesday

Task #3: What to add next?!

- Discuss with a partner what features we should add next
- We will share ideas and vote
- Ideas:



Names	Idea	Votes
	Adding lives	0
	Add bombs (3) press space to launch a bomb on a side to clear the blocks on the side	3
	Rainbow block to match all colors	7
	Multiplayer to compete side by side	1
	Collaborative mode two people control the hex turning	0
	Center hex rotates on its own faster and faster	2
	Each block is a different speed (random)	2
	Difficulty level (speed)	

Show and tell next Wednesday

Task #4: Add a “ghost block” that adds to the bottom of the stack

- Make a block that gets added to the bottom
- It should look visually different
- Do you understand how it works?
- How did you test it? Any bugs? How confident are you?

Task #5: Add automated testing

- Brainstorm with Cursor how to add automated testing
- Add unit tests to the project
- How do you run the tests?
- Are they passing or failing?
- How many did you add? Where?

Task #6: Add local multiplayer

- Add local multiplayer that shows you and another player side by side while playing
- Left player uses WASD, right player uses arrow keys
- Continues until both players lose then show both scores

