

2025 - 2026 Generative AI Tutorial Series

How To Use GenAI for Coding

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November 12, 2025

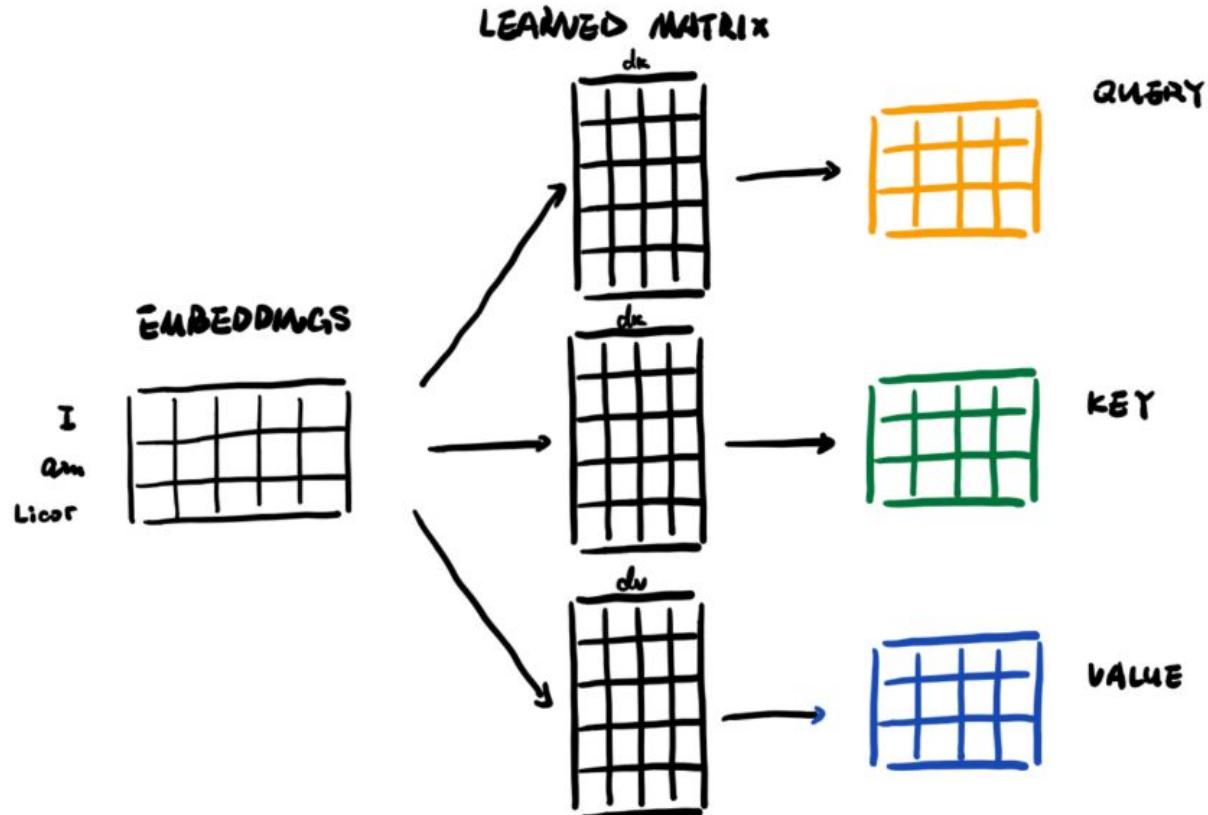


The only agenda is for you to learn some AI coding

- Prompting the chatbot to write full code scripts
- Making unit tests to verify correctness
- Documenting existing code
- Debugging
- Plotting
- AI-assisted data analyses
- And more ...

How (most) LLMs work

- Learn values in large matrices encoding how words relate to each other



How next token (probabilistic) prediction works

1. “The dog []” -
wags (0.5), runs (0.2), barks (0.2), chews (0.1)
2. “The dog wags []” -
his (0.4), **its (0.3)**, her (0.3)
3. “The dog wags its []” -
tail (0.9), paws (0.1)

Setting up your personal computer

1. Download VS code from app store
2. Get a GitHub account
3. Add GitHub Copilot to your VS Code
 - a. <https://code.visualstudio.com/docs/copilot/setup>
4. Set up repository (<https://github.com/sdtemple/how-to-use-ai>)
5. Install a package manager
 - a. <https://isweep.readthedocs.io/en/latest/misc.html>
6. Activate a Python + R environment
 - a. `mamba env create -f environment.yml`

We will work through various code tutorials

- Don't write code! Prompt the chatbot to write code
- Fork the repository <https://github.com/sdtemple/how-to-use-ai>
- `git clone <https://github.com/your-username/how-to-use-ai.git>`
- `git checkout -b my-answers`
- `git push --set-upstream origin my-answers`

- Or, download the folder and unzip
- Or, use GitHub Codespaces from your forked repo

Please Take This Survey!

**Please complete this survey! Your input helps us with
our future programming!**

