

2025 - 2026 Generative AI Tutorial Series

How To Use GenAI for Coding

*Dr. Seth Temple,
MIDAS Schmidt AI in Science Postdoctoral Research Fellow*

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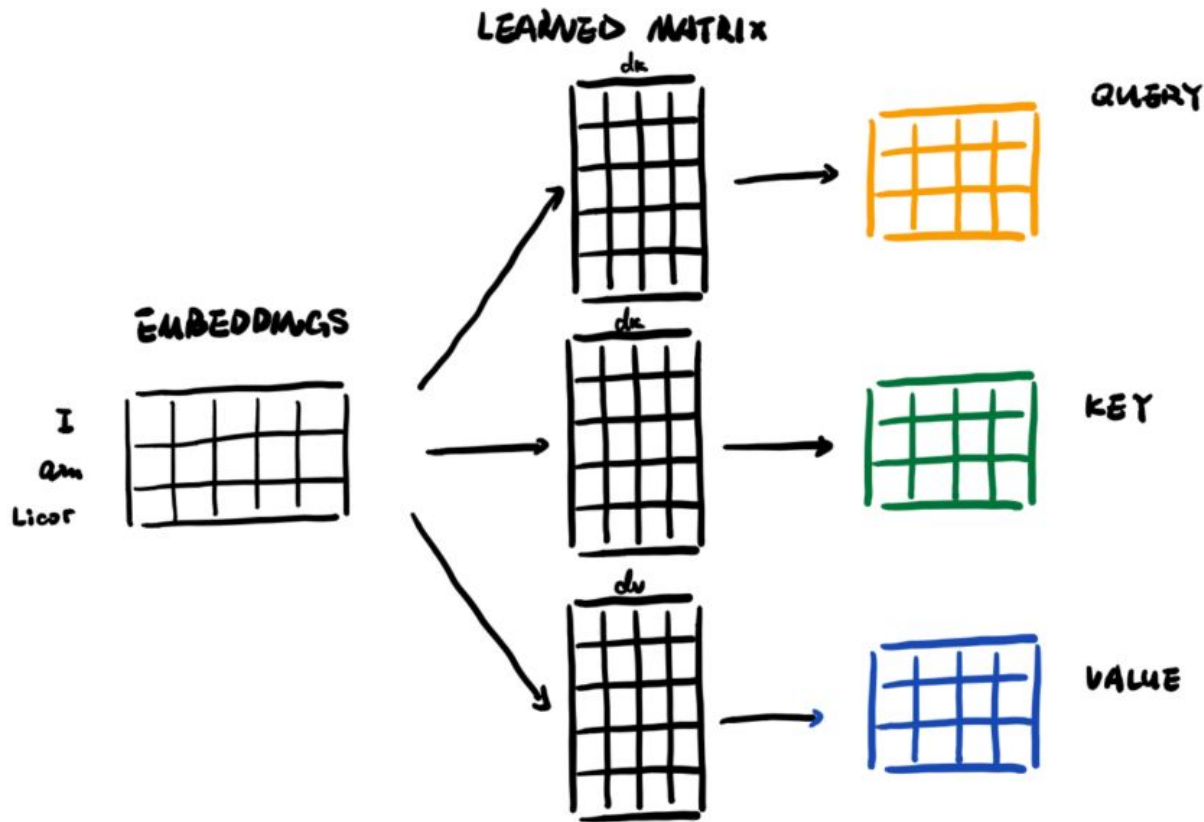
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The only agenda is for you to learn some AI coding

- 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

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our future programming!**



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