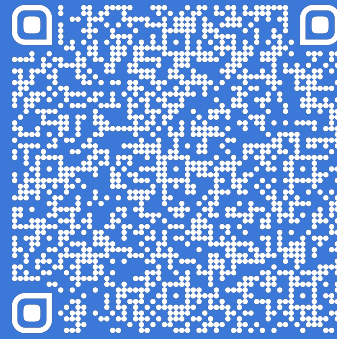
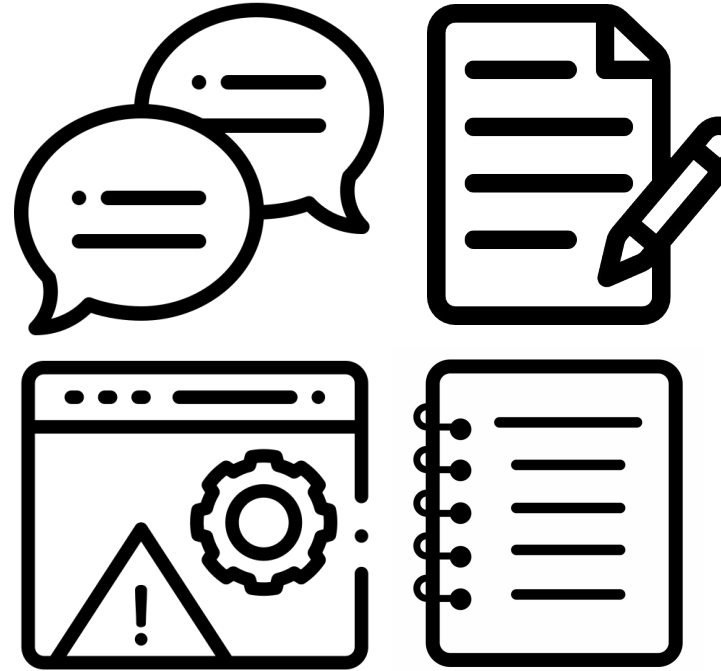
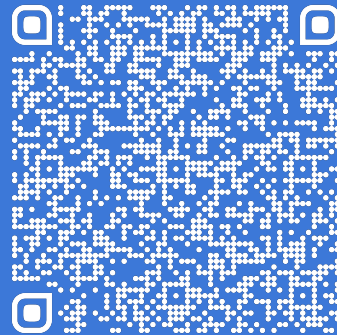


Improving writing instruction Through LLM Scripting



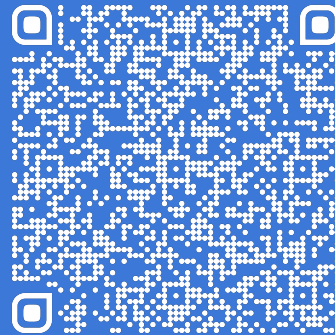
- Starting points
- Creating self-grading assignments
- Organizing assignment results
- Checking grammatical accuracy





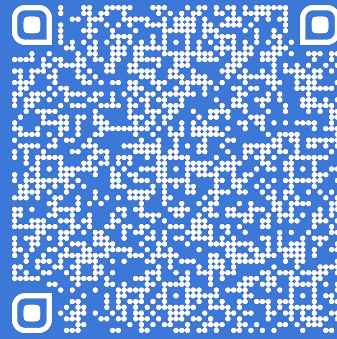
Starting points

- Think **critically** about AI (i.e., applied statistics)
- Large Language Models are **revolutionary**
 - **human** languages
 - **programming** languages



Starting points

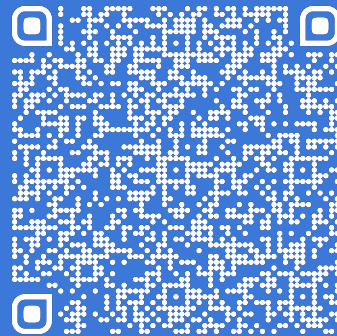
- As a result, educators should:
 - make their own programs (i.e., python scripts)
 - streamline their workload
 - focus on direct interaction with students



Starting points

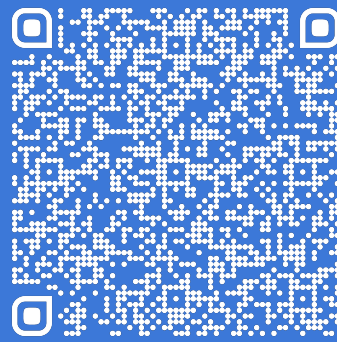
- **Ipsative assessment:**
 - assessment based on improvement
 - rather than criteria or peer comparison
- **Implementing ipsative assessment:**
 - with extensive assistance from LLMs
 - careful integration with achievement criteria

Zero shot, Chain of thought



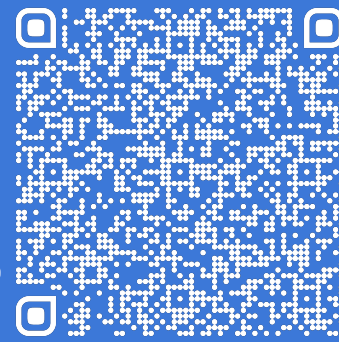
- Zero shot:
 - single prompt
 - no background information
- Chain of thought:
 - series of prompts
 - initial/continuous processing of background information

Creating self-grading assignments



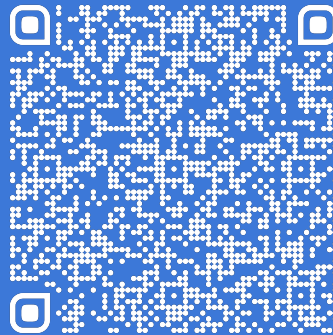
- Why Google Forms?
 - can insert questions from PDFs or ChatGPT
 - **self-grading** for certain data types
 - variety of possible data types
 - text, multiple-choice, audio, video
 - data output to spreadsheets
 - data output **in real-time**

Creating self-grading assignments



- Please follow the instructions in this link to create a Google form using GetMarked:
<https://forms.gle/Sb7TcJDp1tkJ7qqc9>

Creating self-grading assignments



GETMARKED

Developer Guide Blog Log In Sign up

FREE TOOL

Text to quiz converter

Export a quiz to Google Forms, Kahoot, Quizizz or Gimkit directly from plain text.

Copy paste the quiz text from your Google/Word doc to the editor below and format it according to the *instructions*. Then click *convert* to get your question bank file. Exports to Kahoot, Quizizz and Gimkit is done through a spreadsheet file, which is easily importable into the target platforms.

If you are looking for a one-click import solution that **doesn't require you to make any changes** to your quiz document, or if your questions contains images or math formulas, we have a more advance paid import tool. [Register for a free trial](#) and try us out! We export to Canvas, Brightspace, Schoology, Blooket, [Edulastic](#) and more.

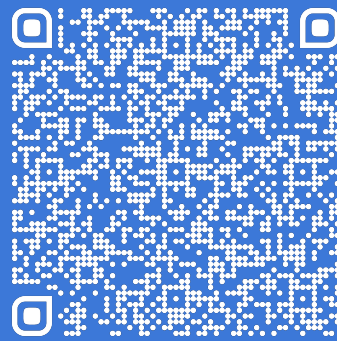
Google Forms ⌵

Instructions Generate sample quiz Clear text

Paste or type your quiz text here...

Convert

Creating self-grading assignments

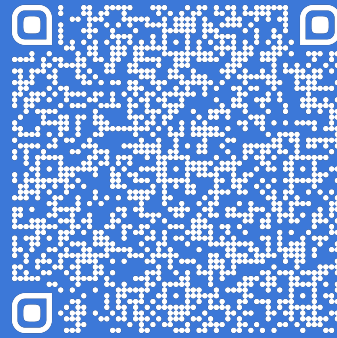


Apps Script












New project

Creating self-grading assignments

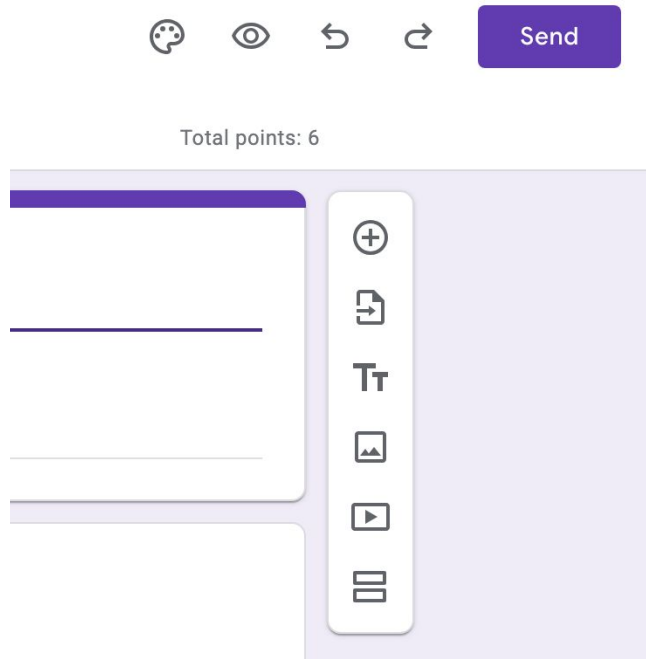
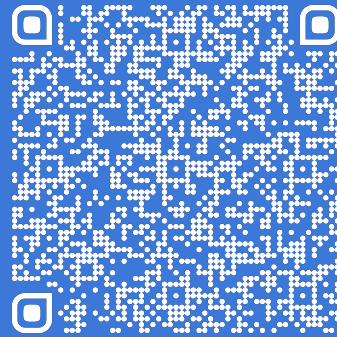


Apps Script

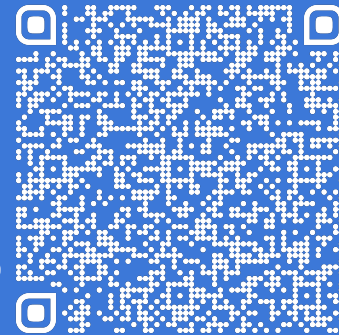
getmarked

    	Files	AZ +	    Run	
	Code.gs		1	function duplicat
	Libraries	+	2	..var templatefor
	Services	+	3	..var destFolder
			4	..
		5	..// Define the v	
		6	..var formTitle =	
		7	..	

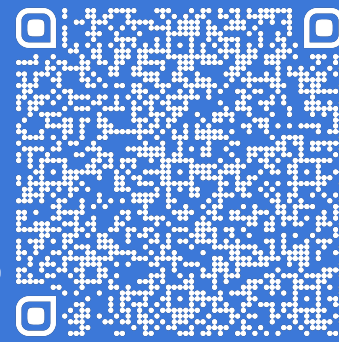
Creating self-grading assignments



Creating self-grading assignments

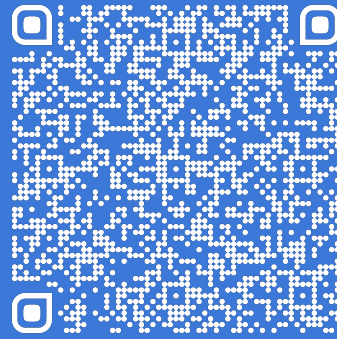
A screenshot of the 'Send form' dialog box in Google Forms. The dialog has a title bar 'Send form' with a close button 'X'. It contains several sections: 'Collect email addresses' with a dropdown menu set to 'Do not collect'; 'Send via' with icons for email, link, and code, where the link icon is selected and highlighted with a purple underline; 'Link' section showing the URL 'https://forms.gle/wsfDFgp68oChwqeR8' which is highlighted in blue; a 'Shorten URL' checkbox which is checked; and a 'Copy' button. A tooltip 'Press %C to copy' is visible near the 'Shorten URL' checkbox. The background shows a blurred view of the form editor.

Creating self-grading assignments



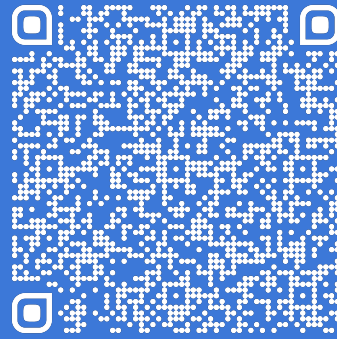
- Please follow the instructions in this link to create a Google form using GetMarked:
<https://forms.gle/Sb7TcJDp1tkJ7qqc9>

Organizing assignment results



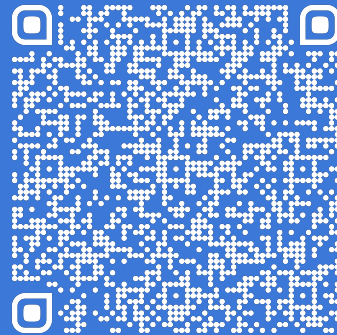
- Why Google Sheets?
 - receive data in real-time
 - sophisticated data processing
 - attendance, assignments, grades
 - plagiarism detection, content analysis
 - easy output to third-party resources
 - easy input from third-party resources

Organizing assignment results



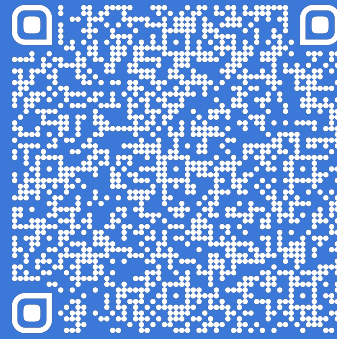
- First columns:
 - each student's name, ID number, e-mail address, & class section
- Later columns
 - attendance, assignments, scores, text of assignments, text of ChatGPT feedback
 - participation grades, statistics (e.g. average number of grammar errors)

Organizing assignment results



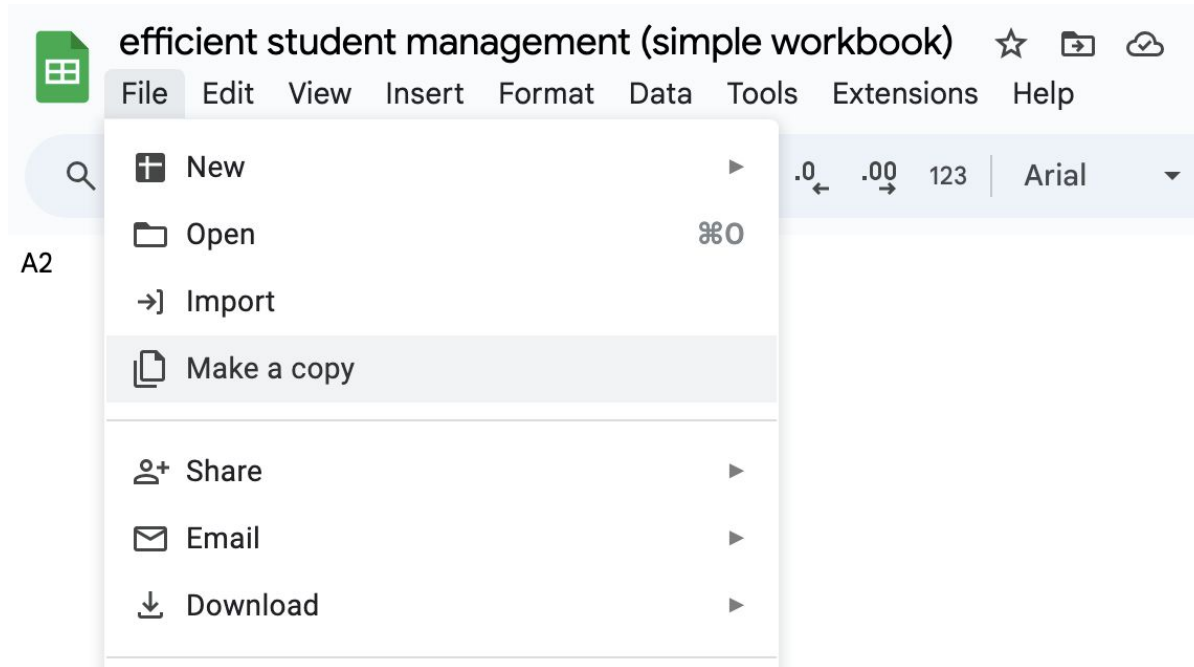
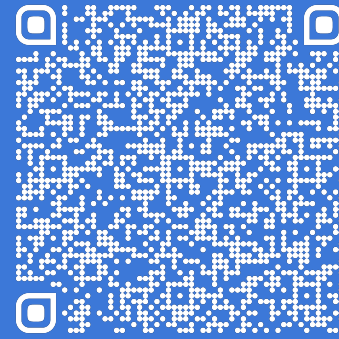
- Later sheets:
 - Google forms output for each assignment
 - datasets for ChatGPT (& third-party resources)
- Third party resources:
 - TSV output (File>Download>Tab Separated Values)
 - run python script
 - paste output in appropriate place

Organizing assignment results

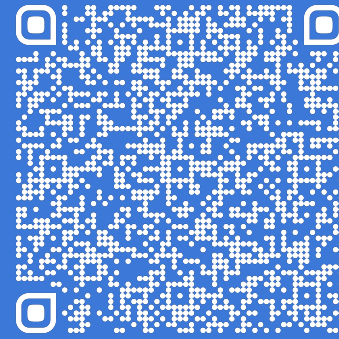


- Please follow the instructions in this link to create a Google Sheet:
<https://forms.gle/z5pwfzABdT5X7sns9>

Organizing assignment results



Organizing assignment results



Copy document ×

Name

efficient student management (YOUR NAME)

Folder

My Drive

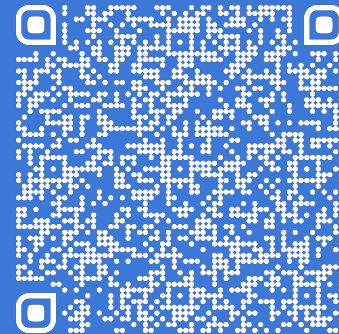
☐ Share it with the same people




☐ Copy comments

☐ Include resolved comments

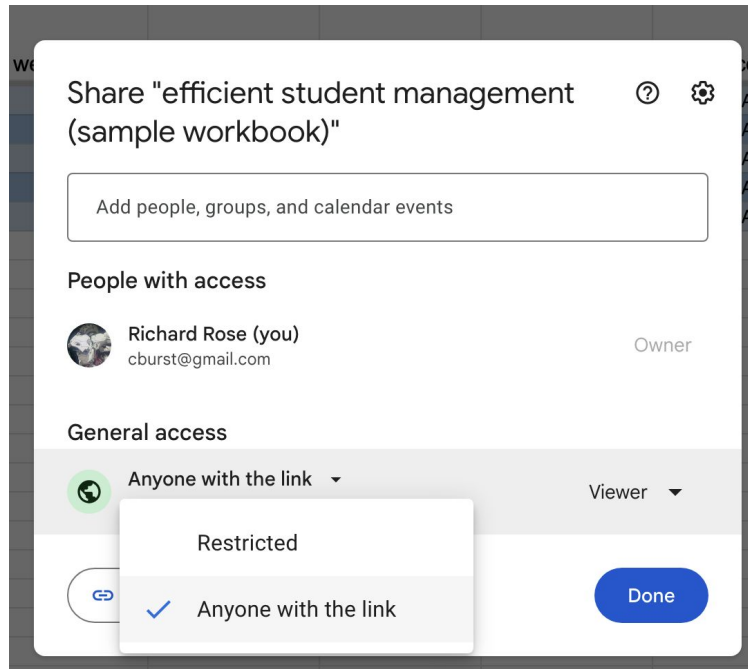
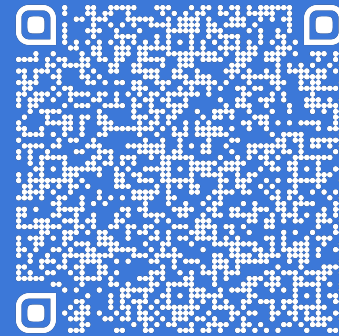
Cancel Make a copy

Organizing assignment results

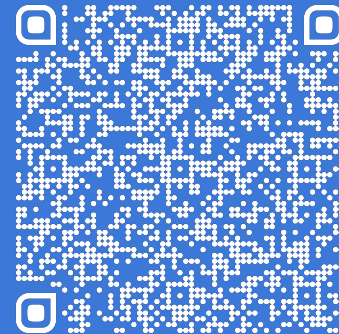


<div><div><div></div><div></div><div></div></div><div>Share</div></div>		
Σ		
L	M	N
W01 ChatGPT Grammar port	W01 Number of grammar errors (Mean)	W01 Number of grammar errors (Standard Deviation)
ere are @6@ grammar	5.8	0.45
e paragraph you	5.4	0.55
e paragraph you	21.2	1.79
e paragraph you	3.6	2.19
e paragraph you	27	7

Organizing assignment results




Organizing assignment results




Share "efficient student management (sample workbook)" ? ⚙️

Add people, groups, and calendar events

People with access

 **Richard Rose (you)**
cburst@gmail.com Owner

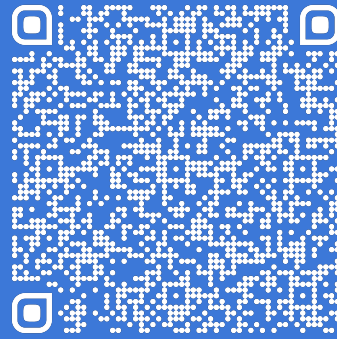
General access

 **Anyone with the link** ▾ Viewer ▾
Anyone on the internet with the link can view

[Copy link](#) [Done](#)

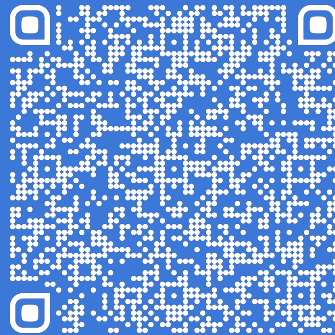
Link copied

Organizing assignment results



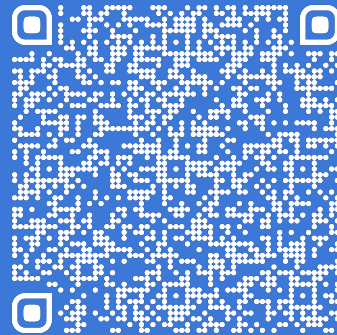
- Please follow the instructions in this link to create a Google Sheet:
<https://forms.gle/z5pwfzABdT5X7sns9>

Checking grammatical accuracy



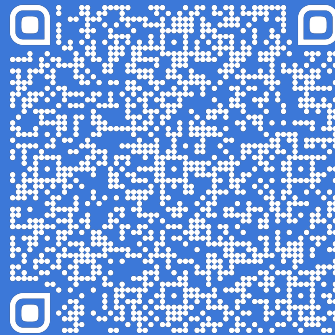
- Download and use scripts shared [HERE](#)
 - [Python](#) (install version [3.11](#))
 - [OpenAI API Key](#) (place as ENV variable)
 - [GPT-CLI](#) & dependencies
- Follow along at your own pace

Checking grammatical accuracy



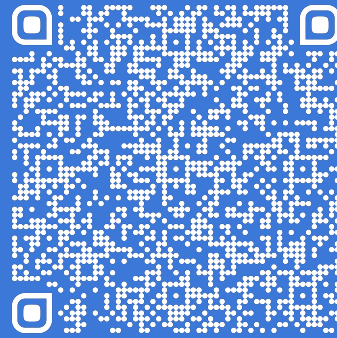
- Why Python?
 - easy to write (with help from ChatGPT)
 - easy to read (mostly plain English)
- Why the command line interface?
 - conduct 1000s of ChatGPT queries
in just a few seconds

Checking grammatical accuracy



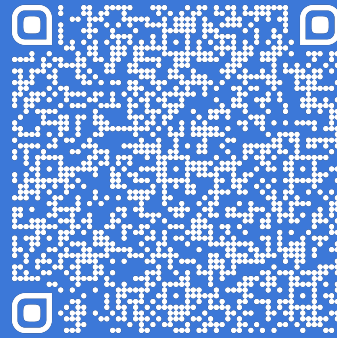
- get OpenAI API Key & copy to clipboard
(<https://platform.openai.com/api-keys>)
Create a Key, Setup Billing, Give them \$5
- Windows/Mac instructions:
Go to [LLMscripting Releases](#)
- Tutorials:
[Windows Tutorial - English](#)
[Windows Tutorial - Korean](#)
[Mac Tutorial - English](#)
[Mac Tutorial - Korean](#)

Checking grammatical accuracy



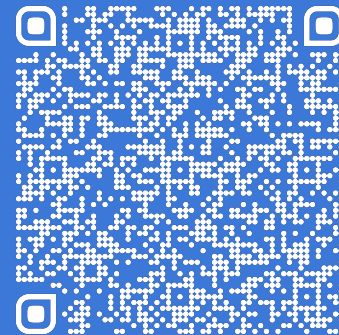
- download `speeches-gen-prompts.tsv`
- place TSV file into `input-files` folder
- go to 'LLMscripting-main'
 - in Windows `Powershell` / Mac `Terminal`
 - On Windows type: `python GPT.py speeches-gen-`
 - On Mac type: `python3 GPT.py speeches-gen-`
- monitor script, use ChatGPT for errors
- copy processed output in `output-files`
- into `speeches-gen-GPTresults B39`

Chain of thought grammatical accuracy

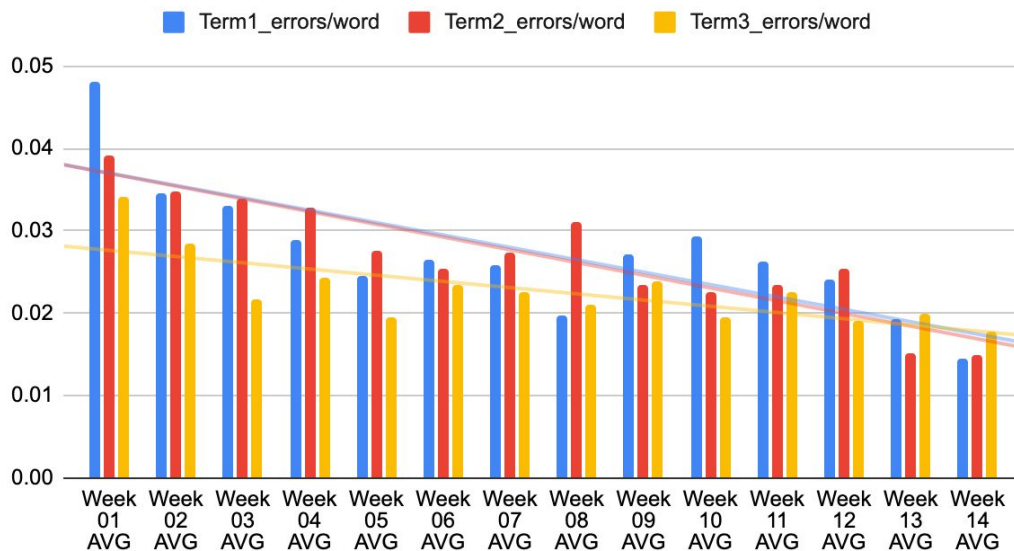


- download `speeches-raw.tsv`
- place TSV file into `input-files` folder
- go to 'LLMscripting-main'
 - in Windows **Powershell** / Mac **Terminal**
 - On Windows type: `python GPT.py speeches-`
 - On Mac type: `python3 GPT.py speeches-`
- monitor script, use ChatGPT for errors
- copy processed output in `output-files`
- into `speeches-multi-GPTresults D126`

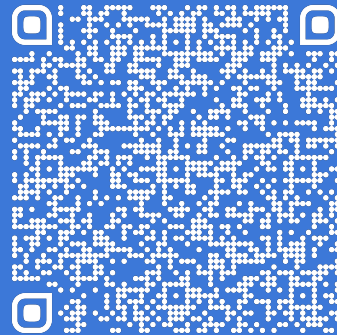
Checking grammatical accuracy



Term 1-3 errors/word



Improving writing instruction Through LLM Scripting



- Thanks for your time and attention
- Let me know if you have any questions
- richard.rose@yonsei.ac.kr

Cite this presentation:

Rose, R. (2024). Improving grammatical accuracy through instructor, peer, and LLM-assisted corrective feedback. Manuscript in preparation.

Rose, R. (2024). Improving syntactic complexity in engineering students' writing through digital portfolios and visual analytics. Manuscript in preparation.

