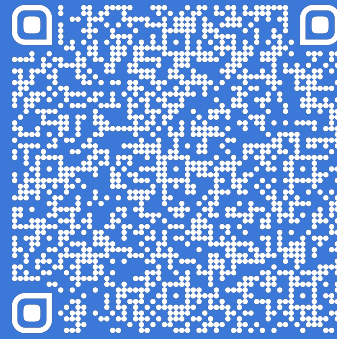
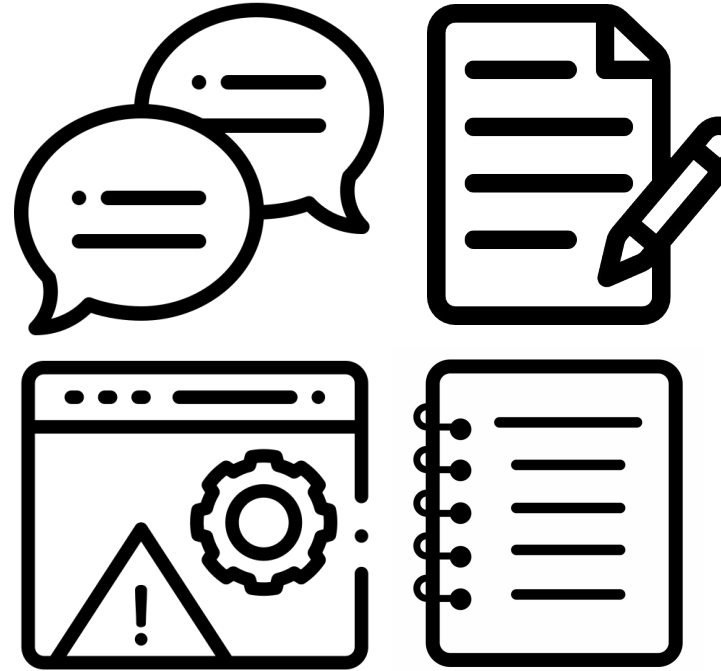
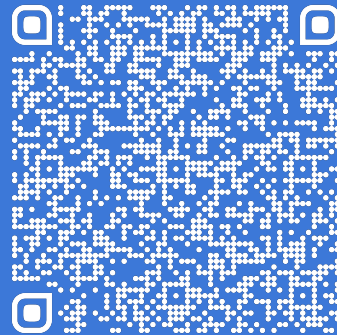


Improving writing instruction Through LLM Scripting



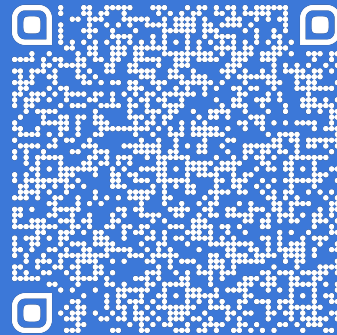
- Starting points
- Creating self-grading assignments
- Organizing assignment results
- Checking grammatical accuracy





Starting points

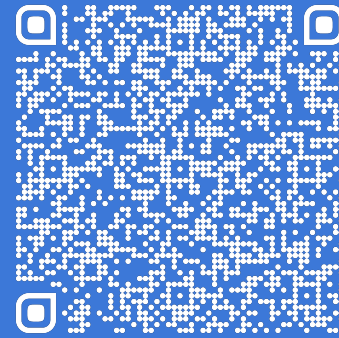
- Think **critically** about AI (i.e., applied statistics)
- Large Language Models are **revolutionary**
 - **human** languages
 - **programming** languages
- Educational practice is often
 - **text** manipulation
- Now **everyone can** manipulate text easily



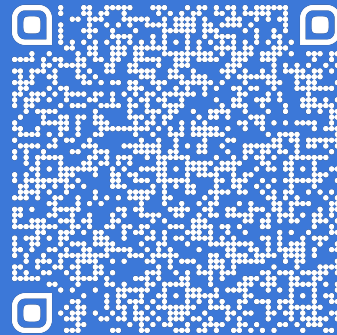
Starting points

- Language learning & Computer programming:
 - both involve text manipulation
 - both recently widely accessible
- As a result, educators should:
 - make their own programs (i.e., python scripts)
 - streamline their workload
 - focus on direct interaction with students

Starting points



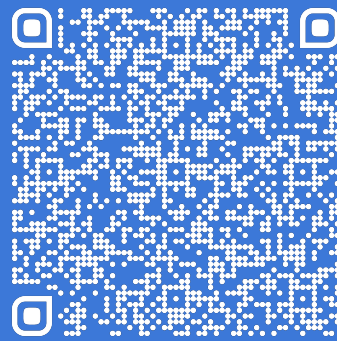
- **Ipsative assessment:**
 - assessment based on improvement
 - rather than criteria or peer comparison
- **Recommendations:**
 - extensive assistance from LLMs
 - careful integration with achievement criteria



Starting points

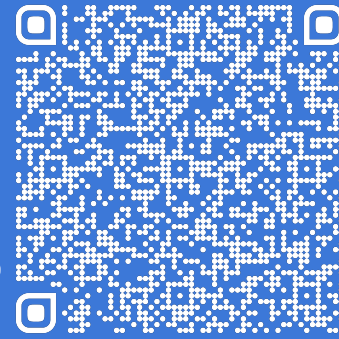
- **problems with third-party GenAI services:**
 - **costly**
 - **closed source / proprietary**
 - **non-retrievable (no stable citation reference)**
 - **difficult to assess reliability & validity**
 - **difficult to replicate precisely**

Creating self-grading assignments



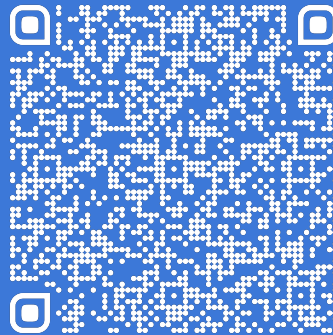
- Why Google Forms?
 - can insert questions from PDFs or ChatGPT
 - **self-grading** for certain data types
 - variety of possible data types
 - text, multiple-choice, audio, video
 - data output to spreadsheets
 - data output **in real-time**

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.

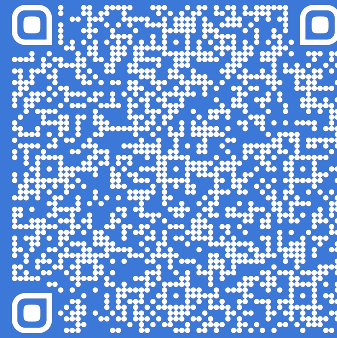
Google Forms ⚙

Instructions Generate sample quiz Clear text

Paste or type your quiz text here...

Convert

Creating self-grading assignments

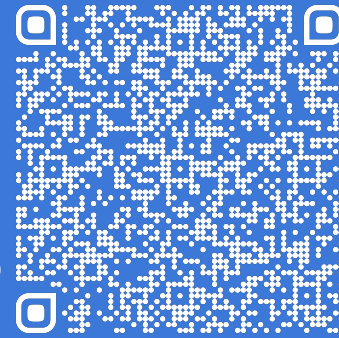


Apps Script
















New project

Creating self-grading assignments

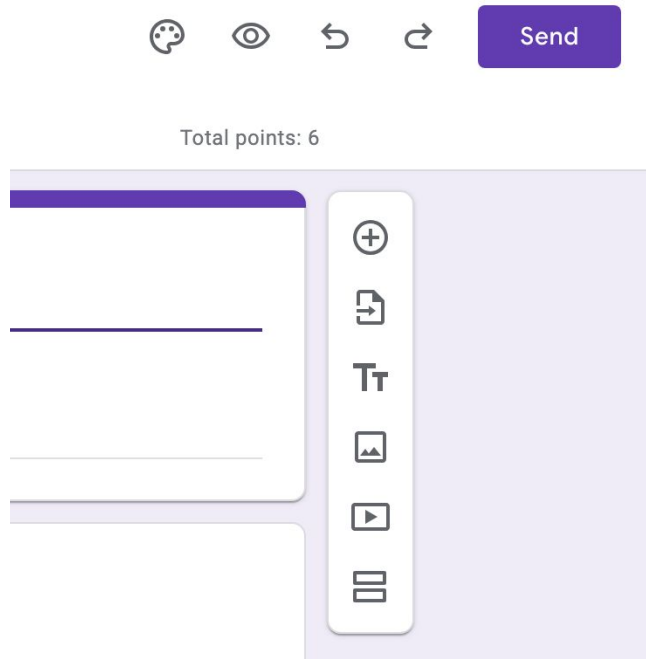
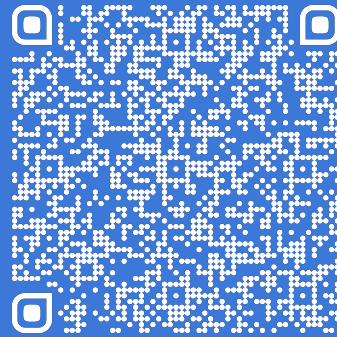


Apps Script

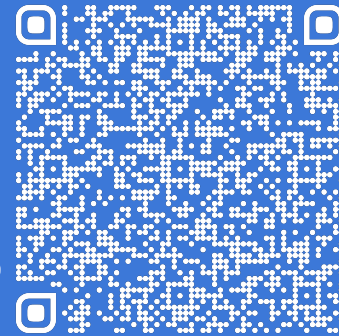
getmarked

	Files  	    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



Send form

Collect email addresses Do not collect

Send via     

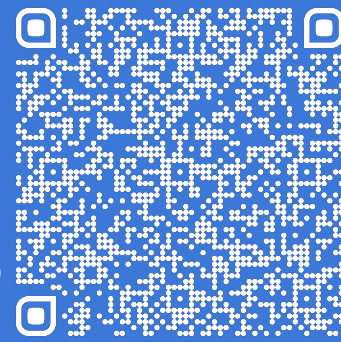
Link

<https://forms.gle/wsfDFgp68oChwqeR8>

☒ Shorten URL Press %C to copy

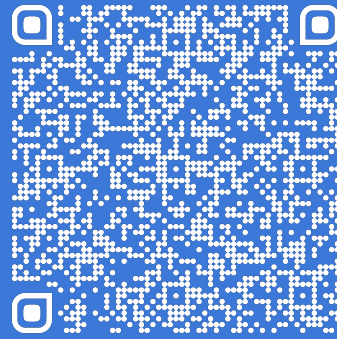
Cancel Copy

Creating self-grading assignments



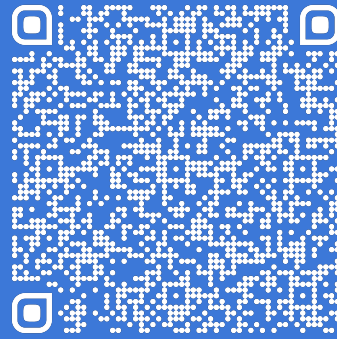
- Please follow the instructions in this link to create a Google form using GetMarked:
<https://forms.gle/Sb7TcJDp1tkJ7qqc9>

Organizing assignment results



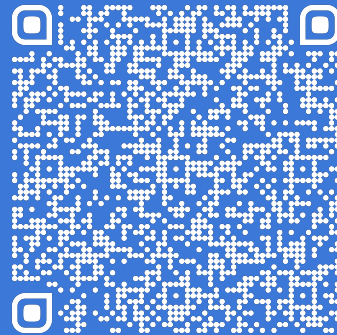
- Why Google Sheets?
 - receive data in real-time
 - sophisticated data processing
 - attendance, assignments, grades
 - plagiarism detection, content analysis
 - easy output to third-party resources
 - easy input from third-party resources

Organizing assignment results



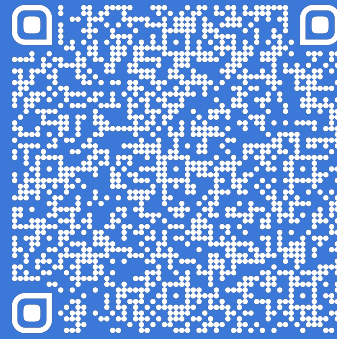
- First columns:
 - each student's name, ID number, e-mail address, & class section
- Later columns
 - attendance, assignments, scores, text of assignments, text of ChatGPT feedback
 - participation grades, statistics (e.g. average number of grammar errors)

Organizing assignment results



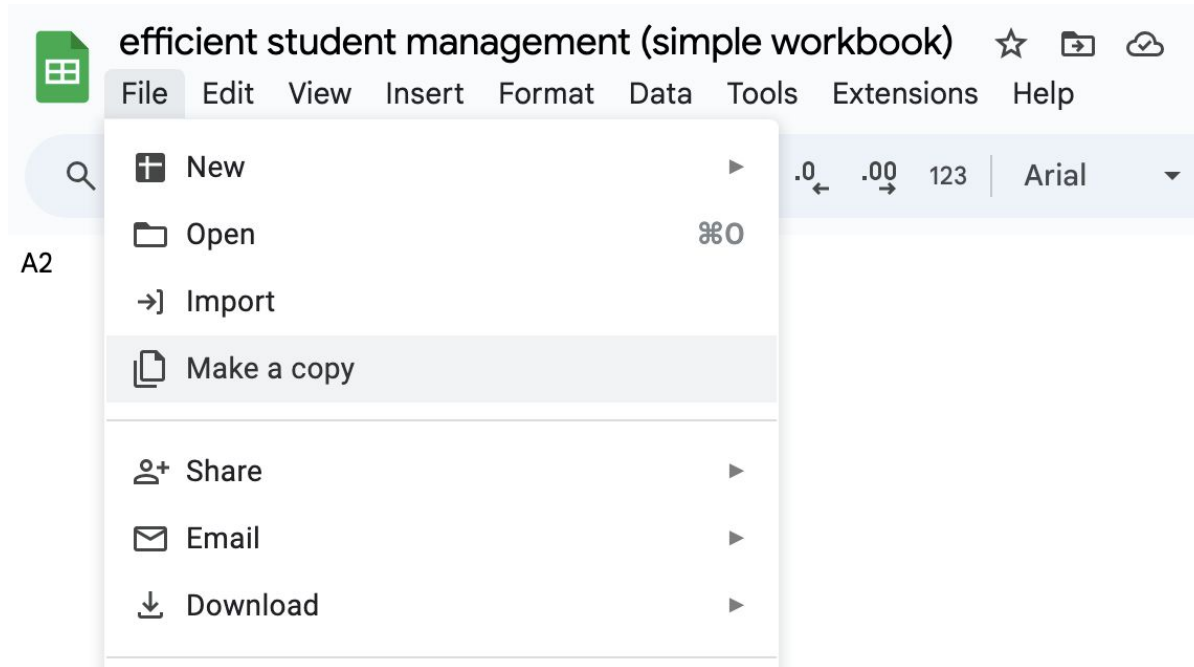
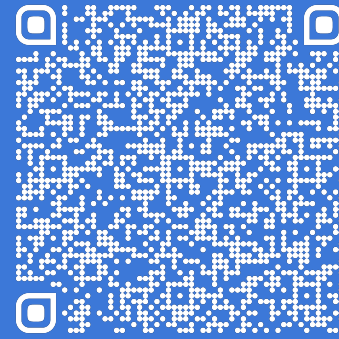
- Later sheets:
 - Google forms output for each assignment
 - datasets for ChatGPT (& third-party resources)
- Third party resources:
 - TSV output (File>Download>Tab Separated Values)
 - run python script
 - paste output in appropriate place

Organizing assignment results

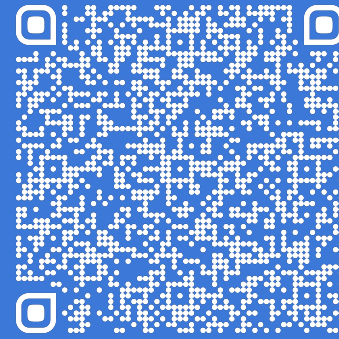


- Please follow the instructions in this link to create a Google Sheet:
<https://forms.gle/z5pwfzABdT5X7sns9>

Organizing assignment results



Organizing assignment results



Copy document ×

Name

efficient student management (YOUR NAME)

Folder

My Drive

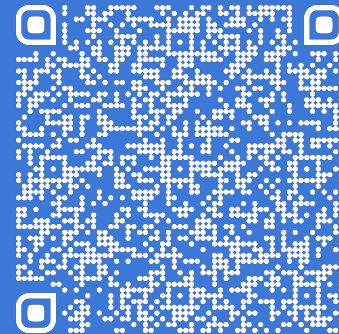
☐ Share it with the same people




☐ Copy comments

☐ Include resolved comments

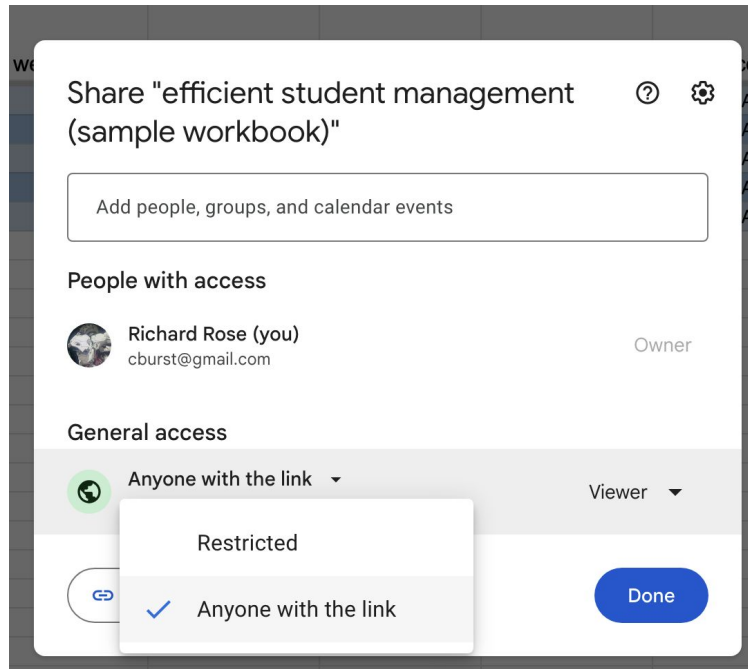
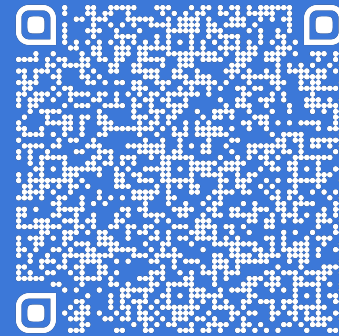
Cancel Make a copy

Organizing assignment results

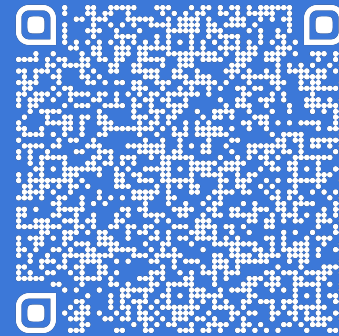


<div><div><div></div><div></div><div></div></div><div>Share</div></div>		
Σ		
L	M	N
W01 ChatGPT Grammar port	W01 Number of grammar errors (Mean)	W01 Number of grammar errors (Standard Deviation)
ere are @6@ grammar	5.8	0.45
e paragraph you	5.4	0.55
e paragraph you	21.2	1.79
e paragraph you	3.6	2.19
e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

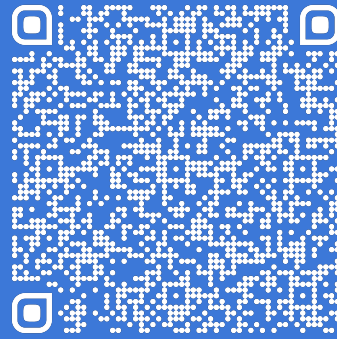
General access

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

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

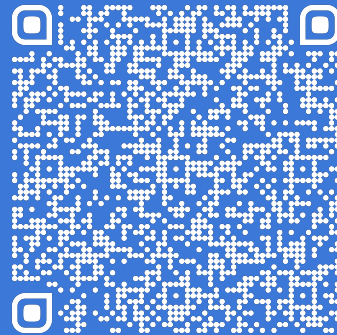
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Organizing assignment results



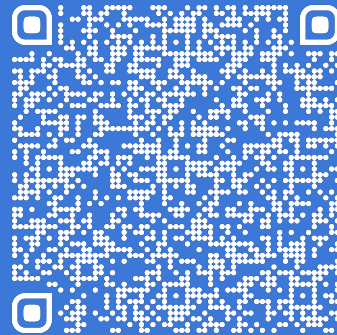
- Please follow the instructions in this link to create a Google Sheet:
<https://forms.gle/z5pwfzABdT5X7sns9>

Checking grammatical accuracy



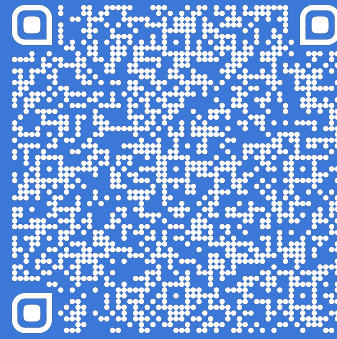
- Download and use scripts shared [HERE](#)
 - [Python](#) (install version [3.11](#))
 - [OpenAI API Key](#) (place in env variable)
 - [GPT-CLI](#) & dependencies
- Follow along at your own pace

Checking grammatical accuracy



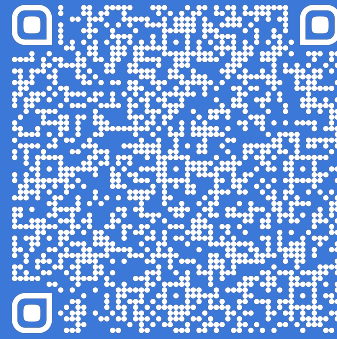
- Why Python?
 - easy to write (with help from ChatGPT)
 - easy to read (mostly plain English)
- Why the command line interface?
 - conduct 1000s of ChatGPT queries
in just a few seconds

Checking grammatical accuracy



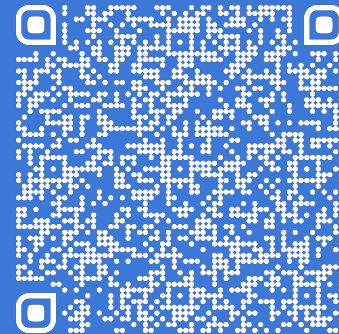
- go to `gpt-cli` folder in Terminal/PowerShell (admin)
- `pip` commands
 - `pip install gpt-cli`
 - `pip install -r requirements.txt`
 - `pip install google-generativeai`
 - `pip install -U openai`
 - `pip install cohere`
 - `pip install colorama`
- get OpenAI API Key and place as environment variable
- (<https://platform.openai.com/api-keys>)

Checking grammatical accuracy

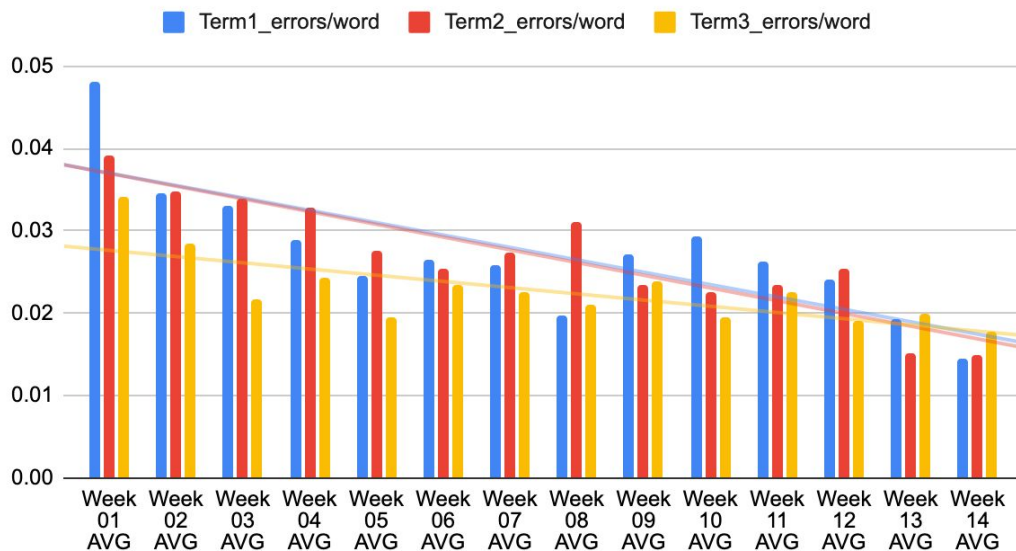


- download `speeches-gen-prompts.tsv`
- place TSV file into **input-files** folder
- go to 'efficient-student-management-main' in **Windows Powershell**
- type: `python GPT.py speeches-gen-`
- monitor script, use ChatGPT for errors
- copy processed output in **output-files**
- into **speeches-gen-GPTresults B39**

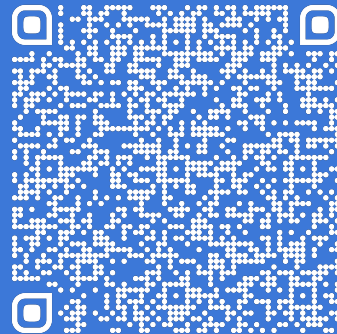
Checking grammatical accuracy



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.

