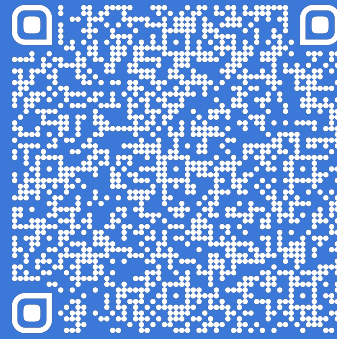
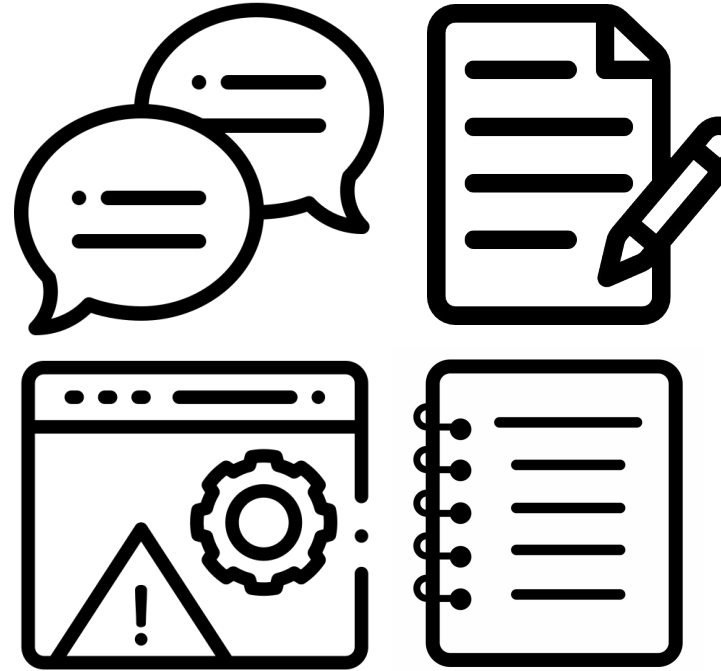


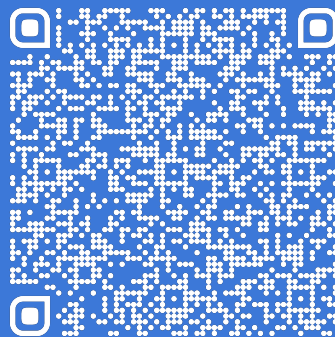
Improving writing instruction Through LLM Scripting



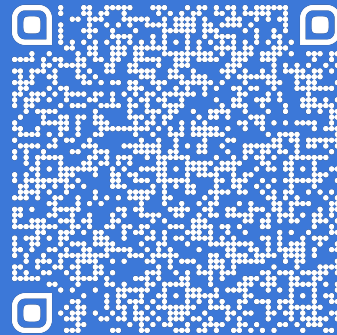
- Starting points
- Creating self-grading assignments
- Organizing assignment results
- Checking grammatical accuracy



Starting points

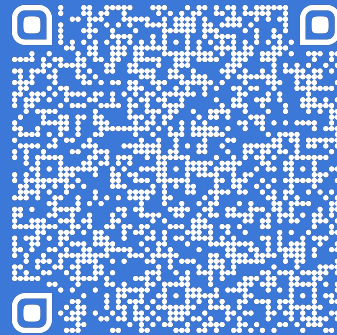


- Go to: github.com/cburst/LLMscripting
 - Download and install the software
- Go to: platform.openai.com/api-keys
 - Create an **API key**
 - Setup billing and add **\$5**



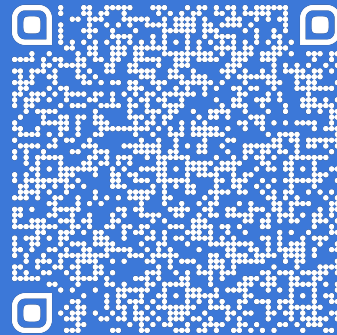
Starting points

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



Starting points

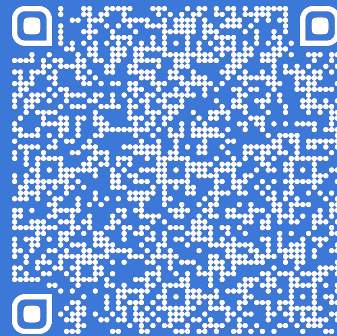
- As a result, educators should:
 - make their own programs (i.e., python scripts)
 - streamline their workload
 - focus on direct interaction with students



Starting points

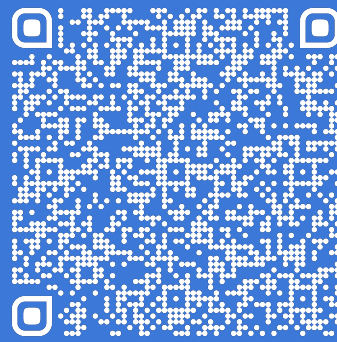
- **Ipsative assessment:**
 - assessment based on improvement
 - rather than criteria or peer comparison
- **Implementing ipsative assessment:**
 - with extensive assistance from LLMs
 - careful integration with achievement criteria

Zero shot, Chain of thought



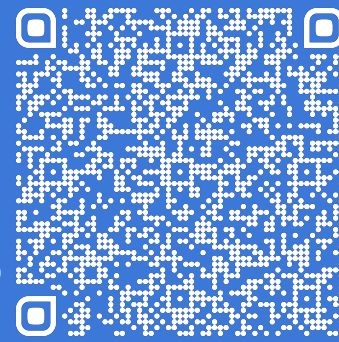
- Zero shot:
 - single prompt
 - no background information
- Chain of thought:
 - series of prompts
 - initial/continuous processing of background information

Creating self-grading assignments



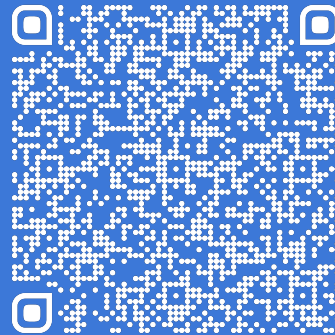
- Why Google Forms?
 - can insert questions from PDFs or ChatGPT
 - **self-grading** for certain data types
 - variety of possible data types
 - text, multiple-choice, audio, video
 - data output to spreadsheets
 - data output **in real-time**

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

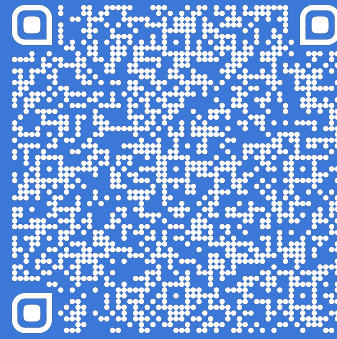
Generate sample quiz

Clear text

Paste or type your quiz text here...

Convert

Creating self-grading assignments

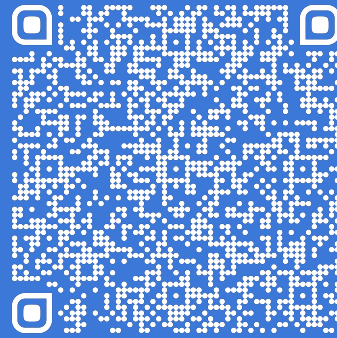


Apps Script
















New project

Creating self-grading assignments

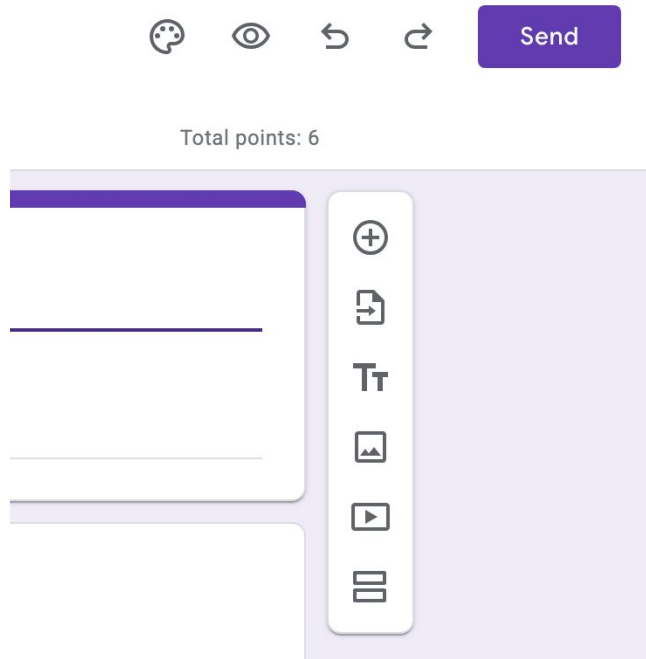
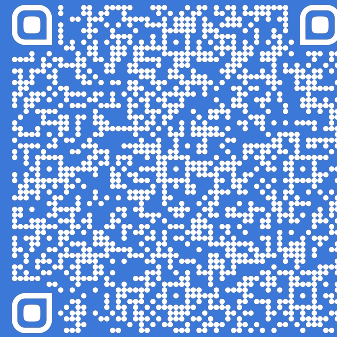


Apps Script

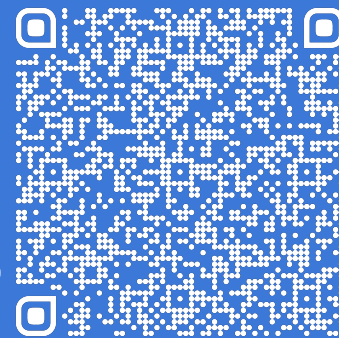
getmarked

	Files  	    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     

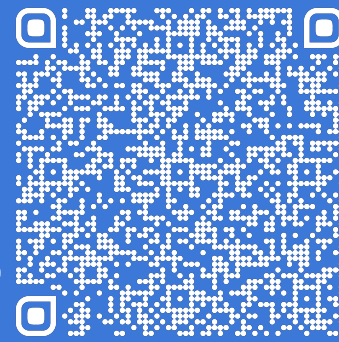
Link

<https://forms.gle/wsfDFgp68oChwqeR8>

☒ Shorten URL Press %C to copy

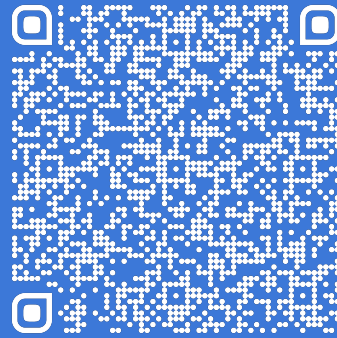
Cancel Copy

Creating self-grading assignments



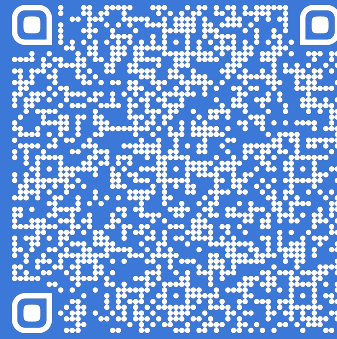
- Please follow the instructions in this link to create a Google form using GetMarked:
<https://forms.gle/Sb7TcJDp1tkJ7qqc9>

Organizing assignment results



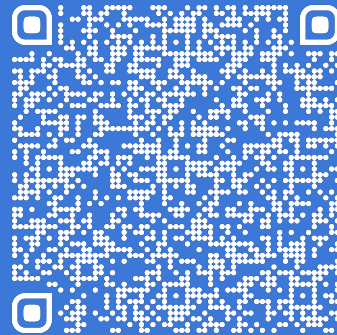
- Why Google Sheets?
 - receive data in real-time
 - sophisticated data processing
 - attendance, assignments, grades
 - plagiarism detection, content analysis
 - easy output to third-party resources
 - easy input from third-party resources

Organizing assignment results



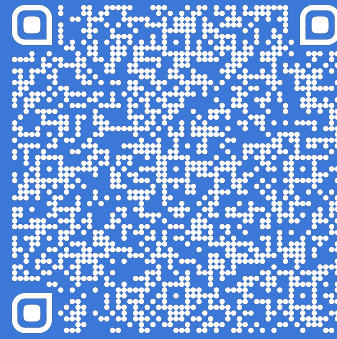
- First columns:
 - each student's name, ID number, e-mail address, & class section
- Later columns
 - attendance, assignments, scores, text of assignments, text of ChatGPT feedback
 - participation grades, statistics (e.g. average number of grammar errors)

Organizing assignment results



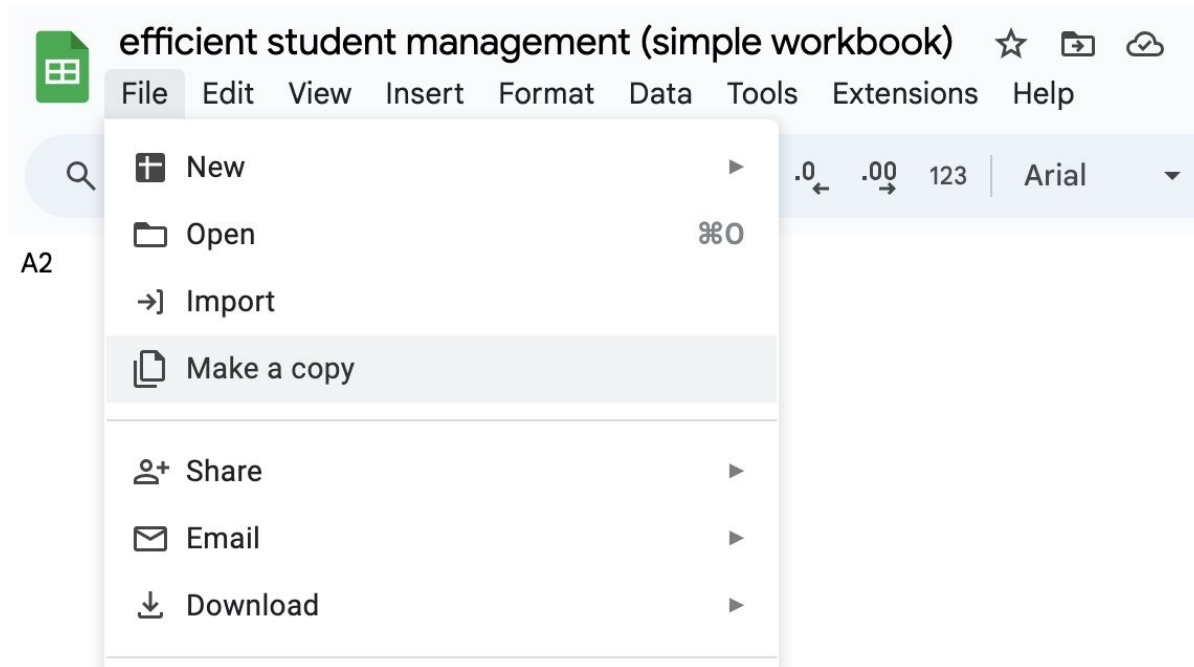
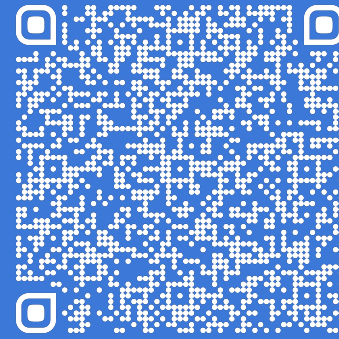
- Later sheets:
 - Google forms output for each assignment
 - datasets for ChatGPT (& third-party resources)
- Third party resources:
 - TSV output (File>Download>Tab Separated Values)
 - run python script
 - paste output in appropriate place

Organizing assignment results

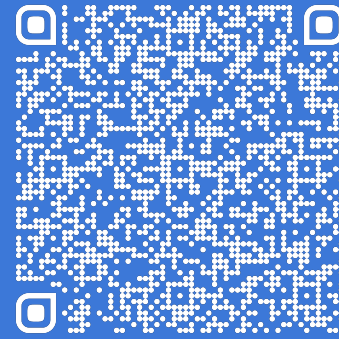


- Please follow the instructions in this link to create a Google Sheet:
<https://forms.gle/z5pwfzABdT5X7sns9>

Organizing assignment results



Organizing assignment results



Copy document ×

Name

efficient student management (YOUR NAME)

Folder

My Drive

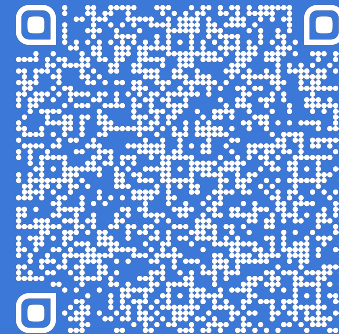
☐ Share it with the same people




☐ Copy comments

☐ Include resolved comments

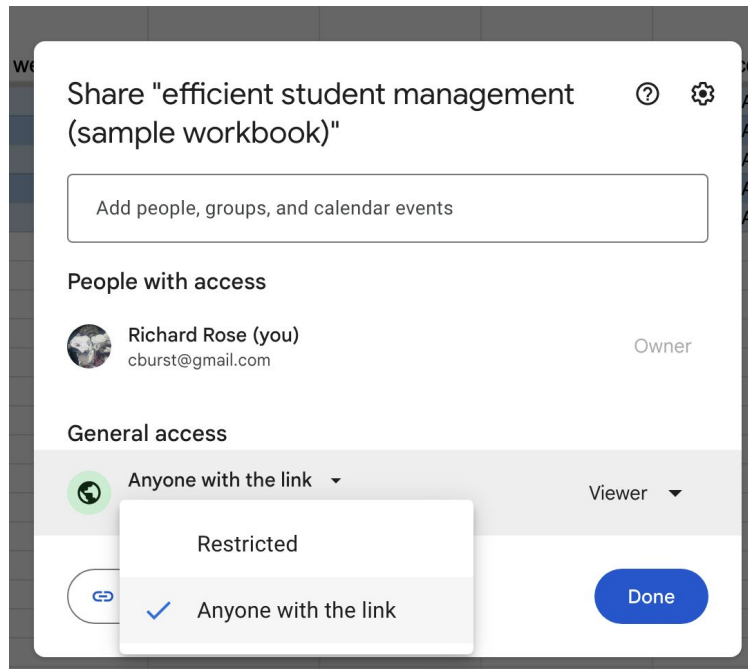
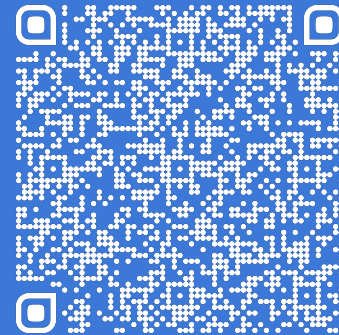
Cancel Make a copy

Organizing assignment results

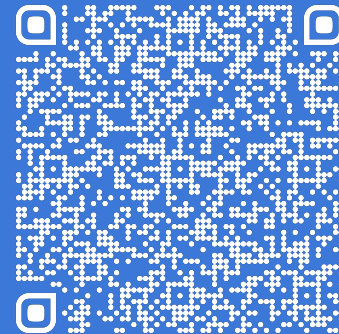


<div><div><div></div><div></div><div></div></div><div>Share</div></div>		
Σ		
L	M	N
W01 ChatGPT Grammar port	W01 Number of grammar errors (Mean)	W01 Number of grammar errors (Standard Deviation)
ere are @6@ grammar	5.8	0.45
e paragraph you	5.4	0.55
e paragraph you	21.2	1.79
e paragraph you	3.6	2.19
e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

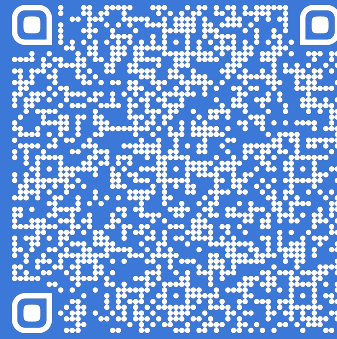
General access

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

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

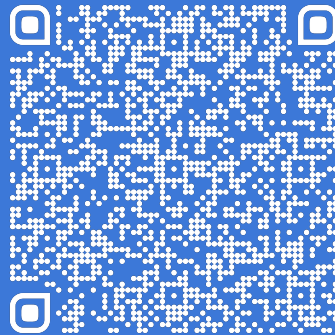
Link copied

Organizing assignment results



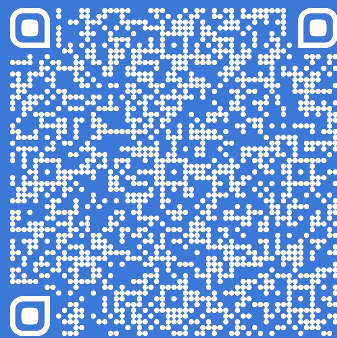
- Please follow the instructions in this link to create a Google Sheet:
<https://forms.gle/z5pwfzABdT5X7sns9>

Checking grammatical accuracy



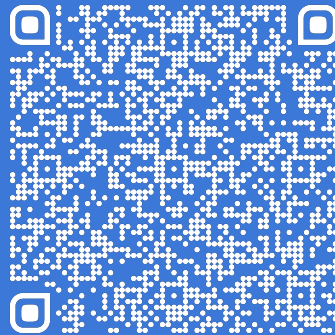
- Download and use scripts shared [HERE](#)
 - [Python](#) (install version [3.11](#))
 - [OpenAI API Key](#) (place as ENV variable)
 - [GPT-CLI](#) & dependencies
- Follow along at your own pace

Checking grammatical accuracy



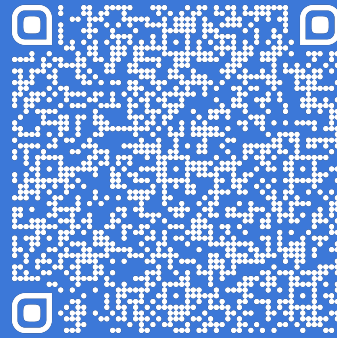
- Why Python?
 - easy to write (with help from ChatGPT)
 - easy to read (mostly plain English)
- Why the command line interface?
 - conduct 1000s of ChatGPT queries
in just a few seconds

Checking grammatical accuracy



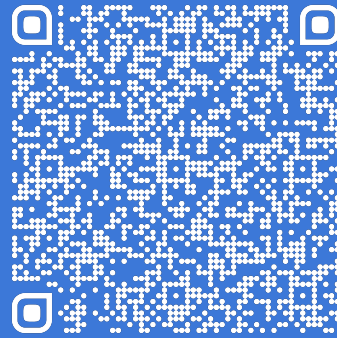
- get OpenAI API Key & copy to clipboard
(<https://platform.openai.com/api-keys>)
Create a Key, Setup Billing, Give them \$5
- Windows/Mac instructions:
Go to [LLMscripting Releases](#)
- Tutorials:
[Windows Tutorial - English](#)
[Windows Tutorial - Korean](#)
[Mac Tutorial - English](#)
[Mac Tutorial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

Checking grammatical accuracy



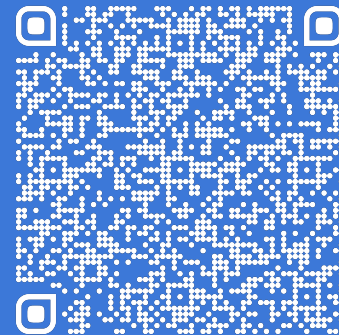
- download `speeches-gen-prompts.tsv`
- place TSV file into `input-files` folder
- go to 'LLMscripting-main'
 - in Windows **Powershell** / Mac **Terminal**
 - On Windows type: `python GPT.py speeches-gen-`
 - On Mac type: `python3 GPT.py speeches-gen-`
- monitor script, use ChatGPT for errors
- copy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

Chain of thought grammatical accuracy

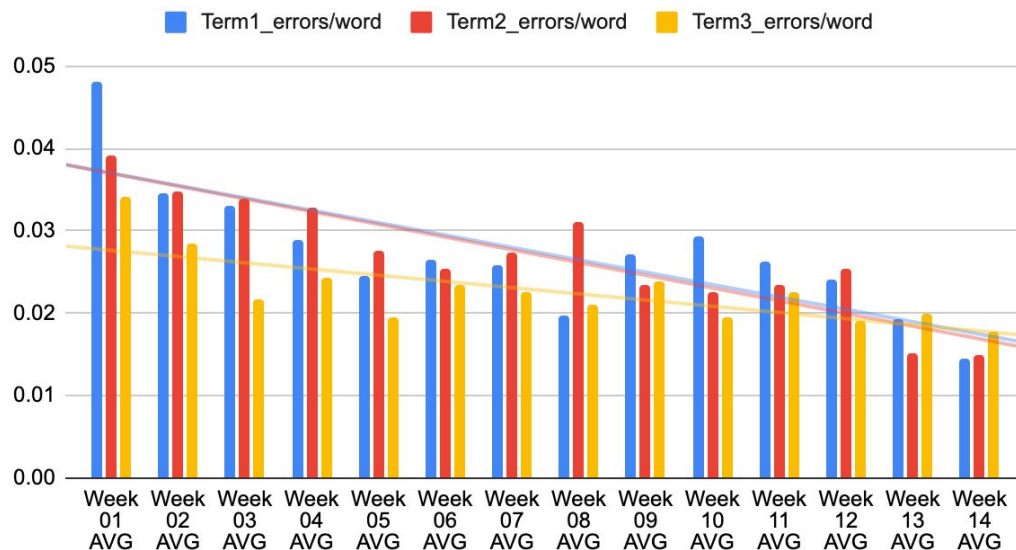


- download `speeches-raw.tsv`
- place TSV file into `input-files` folder
- go to 'LLMscripting-main'
 - in Windows **Powershell** / Mac **Terminal**
 - On Windows type: `python GPT.py speeches-`
 - On Mac type: `python3 GPT.py speeches-`
- monitor script, use ChatGPT for errors
- copy processed output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

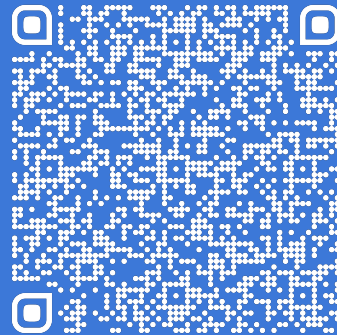
Checking grammatical accuracy



Term 1-3 errors/word



Improving writing instruction Through LLM Scripting

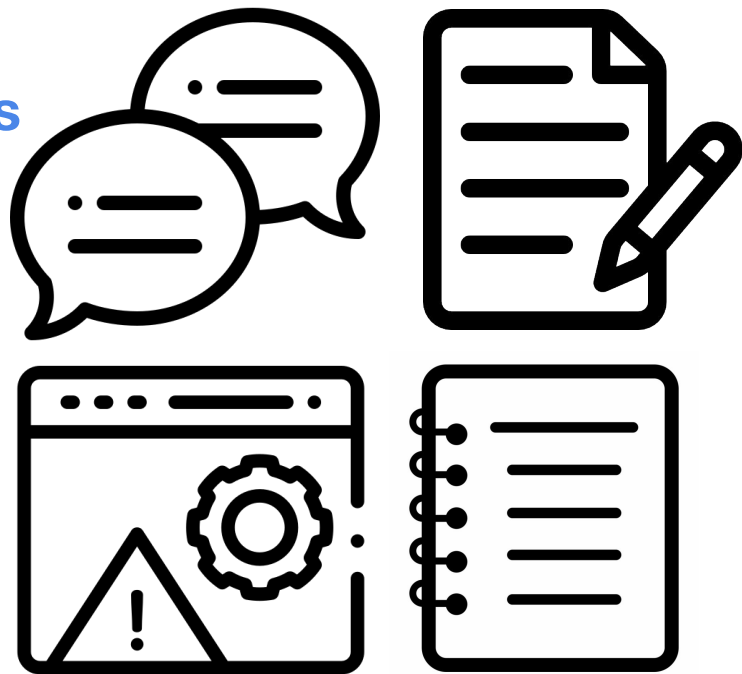


- Thanks for your time and attention
- Let me know if you have any questions
- richard.rose@yonsei.ac.kr

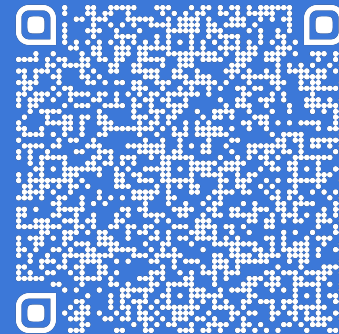
Cite this presentation:

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.



Starting points



Task	Human Component	Machine Component	Human Only Possible?	Machine Only Possible?	Labor type
Getting an eSIM	Telecom Clerk	Software (e.g., Saily)	No	Yes	Primarily machine labor
Transportation	Driver	Software (e.g., Grab)	Yes	Yes	Mostly machine labor
Foot Massage	Massage therapist	Hardware (e.g., Bodyfriend) Software (e.g., Google Maps)	Yes	Yes	Mostly human labor
Raising a child	Parent	Hardware (e.g., baby monitors) Software (e.g., Youtube)	Yes	No	Primarily human labor
Academic Writing	Writer/Editor	Hardware (e.g., pen, paper, computer) Software (e.g., Google Docs, ChatGPT)	No	Yes/No/Maybe	Uncertain labor type

