GitHub: Building Your Coding Profile

Teaching Assistants

Boston University

Mar. 24th, 2025



Boston University Department of Electrical & Computer Engineering





GitHub

"collaborative, open sharing in the programming world"

Boston University Department of Electrical & Computer Engineering





Robert Shaw

robertgshaw2-redhat

Unfollow

The Future of Al is Open

At 129 followers - 82 following

@redhat

Boston

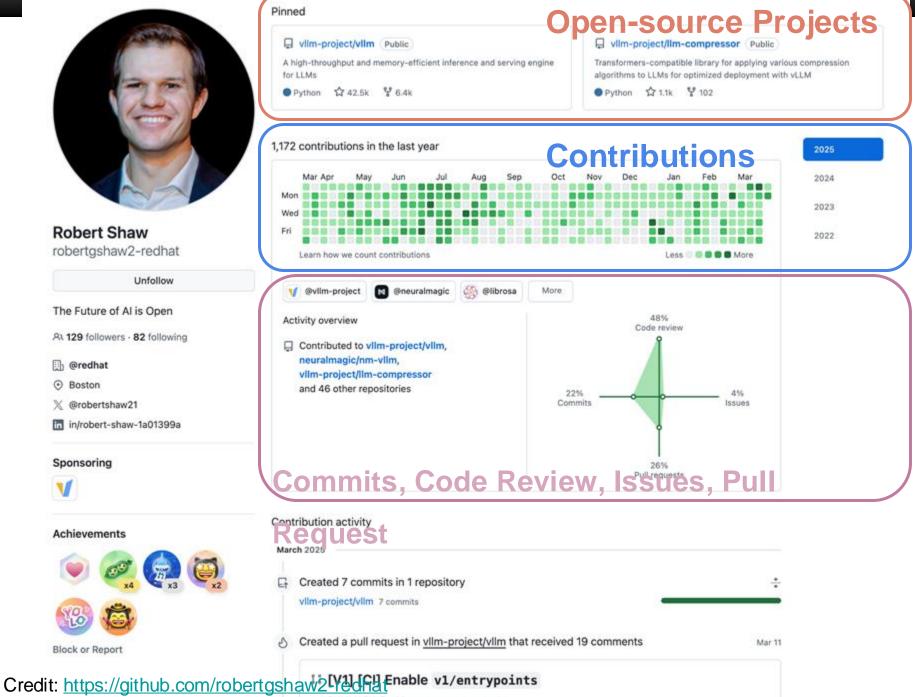
% @robertshaw21

in/robert-shaw-1a01399a

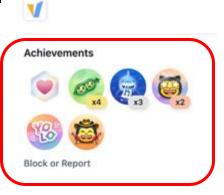
Sponsoring

Achievements





SUMMARY: Enable v1/entrypoints tests



Sponsoring

Specific

Contributions

int	ribution activity	
arc	h 2025	
1	Created 7 commits in 1 repository	*
	vlim-project/vlim 7 commits	-
>	Created a pull request in <u>vllm-project/vllm</u> that re-	ceived 19 comments Mar 1
	II [V1] [CI] Enable v1/entrypoints	
	SUMMARY: Enable v1/entrypoints tests	
	+10 -7 IIII lines changed + 19 comments	
2	Opened 15 other pull requests in 4 repositories	:
	vlim-project/vilm	🜖 open 🚯 closed 🚯 merged 🚦
	aarnphm/vllm	 merged closed
	yottalabsai/vlim njhill/vlim	1 open 🔹
	rdiand Amri	Includen *
>	Reviewed 75 pull requests in 2 repositories	:
	vlim-project/vlim	25 pull requests
	pytorch/xla	1 pull request 📫
5	Created an issue in vllm-project/vllm that received	d 7 comments Mar 9
	 [Bug]: [V1] Molmo/Aria not suppo 	rted on V1 due to xgrammar
	Your current environment Cannot use these mod bug run the following VLLM_USE_V1=1 pytest -s	els on V1 due to Xgrammar assert 💊 Describe the -x mod
	O 1 task done + 7 comments	
)	Opened 14 other issues in 2 repositories	:
	vllm-project/vllm	🔞 open 🚯 ciosed 🔮
	ai-dynamo/dynamo	O closed

Credit: https://github.com/robertgshaw2-redinit

	Stars and F	orks	
ଂ main 👻 🍄 58 Branches 🛇 56 Tags	Q Go to file t Add file	✓ Code ✓ About	
terrytangyuan [DOC] Add Kubervetes deplo		interence and serving engine for LEWs	
.buildkite	[Frontend] Support tool calling and reasoning parser (#4.	vesterday & docs.vllm.ai	
.github	Replace misc issues with link to forum (#15226)	Links, ago amd cuda inference pytorch transformer llama gpt rocm	
benchmarks	[Misc] Add tuned R1 w8a8 and MoE configs for NVIDIA L2	2 days ago model-serving tpu hpu mlops	
cmake	[Attention] Flash Attention 3 - fp8 (#14570)	NOL ⁵ dy Sgo xpu lim inferentia limops	
csrc	[Kernel] allow non-contiguous input for marlin kernel (#14		
docs	[DOC] Add Kubernetes deployment guide with CPUs (#14	3 hours ago	
examples	[Frontend] Support tool calling and reasoning parser (#14.	yesterday 🏘 Apache-2.0 license	
requirements	[Core] Integrate fastsafetensors loader for loading mode	5 hours ago Security policy	
tests	[Core] Integrate fastsafetensors loader for loading mode		
tools	Update deprecated Python 3.8 typing (#13971)	3 weeks ago	
vilm	[Hardware][Gaudi][Feature] Enable Dynamic MoE for Mixt	… 4 hours ago ⊙ 348 watching	
່ງ .clang-format	[Cl/Build] Enforce style for C++ and CUDA code with clan.	10 months ago 😵 6.4k forks	
dockerignore	[Cl/Build] remove .github from .dockerignore, add dirty re.	5 months ago	
gitignore .	[V1] Enable V1 Fp8 cache for FA3 in the oracle (#15191)	yesterday Releases 55	
] .pre-commit-config.yaml	[VLM] Limit multimodal input cache by memory (#14805)	SIONS 5 days ago	
ු .readthedocs.yaml	Keleases and ver Move requirements into their own directory (#12547)	2 weeks ago + 54 releases	
] .shellcheckrc	[Cl/Build] Add shell script linting using shellcheck (#7925)	4 months ago	
ງ .yapfignore	[issue templates] add some issue templates (#3412)	last year	
CMakeLists.txt	Update to torch==2.6.0 (#12721)	last week	3
CODE_OF_CONDUCT.md	[Cl/Build] Auto-fix Markdown files (#12941)	last month	



Easy, fast, and cheap LLM serving for everyone

| Documentation | Blog | Paper | Twitter/X | User Forum | Developer Slack |

[2025/03] We are collaborating with Ollama to host an Inference Night at Y Combinator in San Francisco on Thursday, March 27, at 6 PM. Discuss all things inference local or data center!

[2025/04] We're hosting our first-ever vLLM Asia Developer Day in Singapore on April 3rd! This is a full-day event (9 AM - 9 PM SGT) in partnership with SGInnovate, AMD, and Embedded LLM. Meet the vLLM team and learn about LLM inference for RL, MI300X, and more! Register Now

Latest News 🔥

- [2025/03] We hosted the first vLLM China Meetup! Please find the meetup slides from vLLM team here.
- [2025/03] We hosted the East Coast vLLM Meetup! Please find the meetup slides here.
- [2025/02] We hosted the ninth vLLM meetup with Meta! Please find the meetup slides from vLLM team here and AMD here. The slides from Meta will not be posted.
- [2025/01] We are excited to announce the alpha release of vLLM V1: A major architectural upgrade with 1.7x speedup! Clean code, optimized execution loop, zero-overhead prefix caching, enhanced multimodal support, and more. Please check out our blog post here.
- [2025/01] We hosted the eighth vLLM meetup with Google Cloud! Please find the meetup slides from vLLM team here, and Google Cloud team here.
- [2024/12] vLLM joins pytorch ecosystem! Easy, Fast, and Cheap LLM Serving for Everyone!
- Previous News

About

vLLM is a fast and easy-to-use library for LLM inference and serving.

Originally developed in the <u>Sky Computing Lab</u> at UC Berkeley, vLLM has evolved into a community-driven project with contributions from both academia and industry.

vLLM is fast with:

g

Markdown: https://www.markdownguide.org/basic-syntax/

README.MD

Markdown Syntax



Switch branches/tags		5,366 Comm
Q Find a branch	[Frontend] Support tool calling and reasoning parser (#14	yester
Branches Tags	Replace misc issues with link to forum (#15226)	4 days
v main default		2 days
add-python-3.13 reduce_scatter_comm	Brance S8 (#14570)	5 days
revert_marlin_bandaid	[Kernel] allow non-contiguous input for marlin kernel (#14	7 hours
revert_10902	[DOC] Add Kubernetes deployment guide with CPUs (#14	3 hours
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tpu_v1_optimized	Update deprecated Python 3.8 typing (#13971)	3 weeks
/iew all branches	[Hardware][Gaudi][Feature] Enable Dynamic MoE for Mixt	4 hours
Clang-format	[Cl/Build] Enforce style for C++ and CUDA code with clan	10 months
🖞 .dockerignore	[Cl/Build] remove .github from .dockerignore, add dirty re	5 months
🗅 .gitignore	[V1] Enable V1 Fp8 cache for FA3 in the oracle (#15191)	yeste
🗅 .pre-commit-config.yaml	[VLM] Limit multimodal input cache by memory (#14805)	last w
🖞 .readthedocs.yaml	Move requirements into their own directory (#12547)	2 weeks
🖞 .shellcheckrc	[Cl/Build] Add shell script linting using shellcheck (#7925)	4 months
🗅 .yapfignore	[issue templates] add some issue templates (#3412)	last
CMakeLists.txt	Update to torch==2.6.0 (#12721)	last w
CODE_OF_CONDUCT.md	[Cl/Build] Auto-fix Markdown files (#12941)	last mo
CONTRIBUTING.md	[Doc] Fix typo error in CONTRIBUTING.md (#10190)	4 months

About

A high-throughput and memory-efficient inference and serving engine for LLMs

& docs.vllm.ai

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C Readme

- Apache-2.0 license
- G Code of conduct
- A Security policy
- 小 Activity
- Custom properties
- ☆ 42.5k stars
- ③ 348 watching
- ¥ 6.4k forks
- Report repository

Releases 55

- ⊙ v0.8.1 (Latest) 5 days ago
- + 54 releases

Sponsor this project

- vllm-project vLLM
 - opencollective.com/vlim

Learn more about GitHub Sponsors



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♀ Fork 6.4k + 🚖 Starred 42.5k +

O Sponsor

⊙ Watch 348 -

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CONTRIBUTING.md	[Doc] Fix typo error in CONTRIBUTING.md (#10190) 4 months a

About

A high-throughput and memory-efficient inference and serving engine for LLMs

& docs.vllm.ai

*

transformer	llama	gpt	rocm
model-serving	tpu	hpu	mlops
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S days ago

+ 54 releases

Sponsor this project

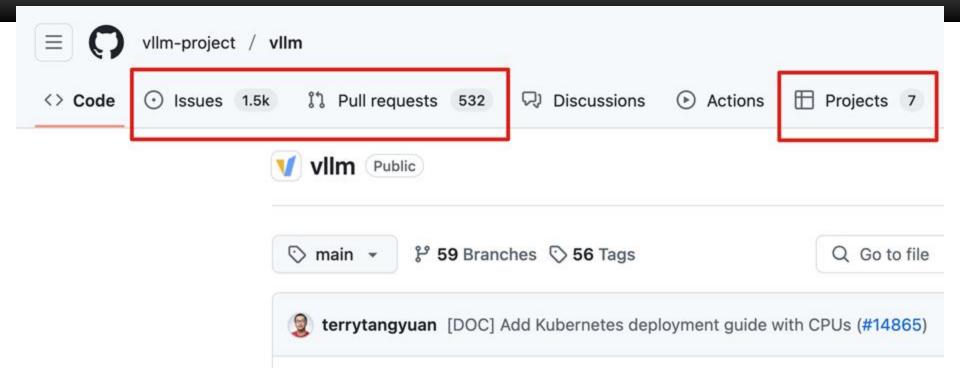
🚺 vllm-project vLLM



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Q



Issues, Pull Requests, Projects



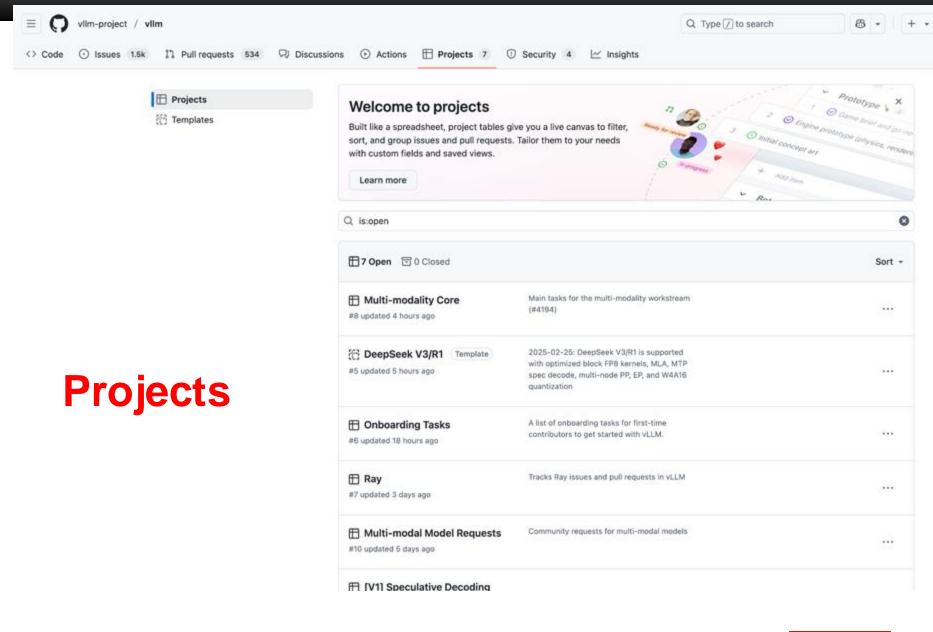
Issues

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	[Bug]: Uncaught exception <class 'valueerror'="">; Qwen2_5_VLModel has no vLLM implementation and th implementation is not compatible with vLLM [bug] #15411 · ItzAmirreza opened 2 hours ago</class>	e Transformers	
	[Feature]: Implement Embedding Models in V1 feature request #15406 · robertgshaw2-redhat opened 4 hours ago		
	• [Bug]: Phi-4-multimodal-instruct encoder outputs didn't have the same length as defined in input_ids #15404 - Luffy-ZY-Wang opened 5 hours ago	bug	
	 [Feature]: JSON based tool calling for Gemma 3 [feature request #15403 · venki-Ifc opened 5 hours ago 		
	[Bug]: Error when use vllm in distributed environment bug #15399 - always-H opened 7 hours ago		P 1
	 [Bug]: AttributeError: Model PixtralForConditionalGeneration does not support BitsAndBytes quantization 'packed_modules_mapping' found. #15396 · devops724 opened 8 hours ago 	ı yet. No	۵
	[Feature]: Add Warning for Chat Template Mismatches similar to SGLang feature request good first issue #15395 · xihajun opened 8 hours ago	I l 1	D 1
	[Bug]: RequestMetrics object (accessed through output[0].metrics) is None bug #15394 · minoskt opened 8 hours ago		D 1

⊙ [Bug]: Batch embedding inference is inconsistent with hf 😡

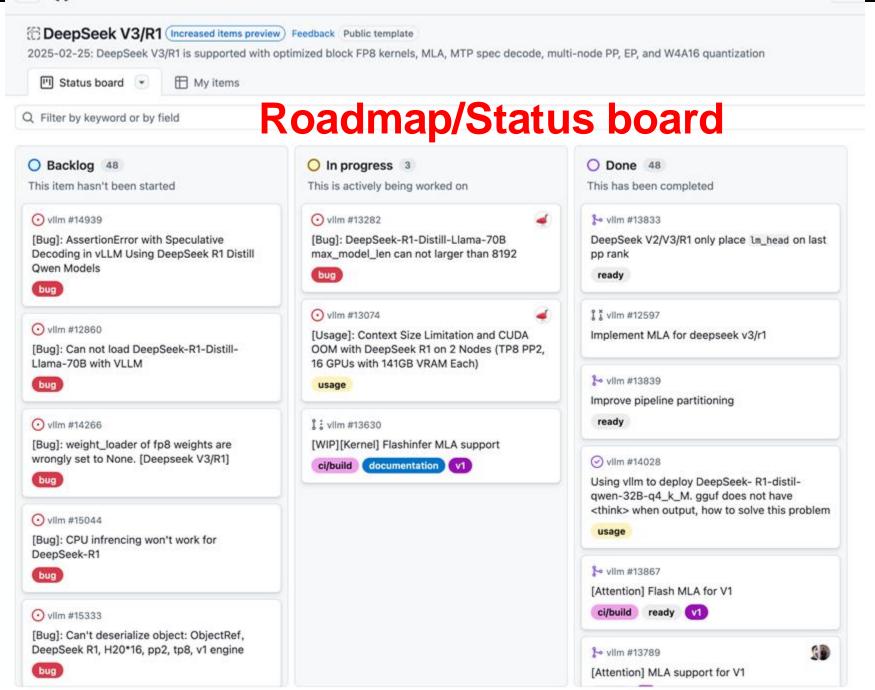
Pull request

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Boston University Department of Electrical & Computer Engineering





Outline

- Git & GitHub
- Basic Git Commands
- Pull Requests & Code Review
- Branches and Merging
- Actions & Automating Tests
- README Examples



Part 1 - Git and GitHub

- Git

- Developer: Linus Torvalds
- Initially for Linux projects
- Extend to collaborative & open-source projects
- Version control system
- Tracks changes in files
- Multiple branches support
- Multiple user support
- Codes merging
- In 2023, <u>93% developers</u> use GitHub

Download: https://git-scm.com/downloads



Part 1 - Git and GitHub

GitHub

- Cloud-based platform
- GitHub copilot
- create, store, manage, and share codes
- Create and store your code in a repository
- Share your work
- Let others review your code and make suggestions
- Collaborate on a shared project

Build and ship software on a single, collaborative platform

Join the world's most widely adopted Al-powered developer platform.



Download Codes (manually)

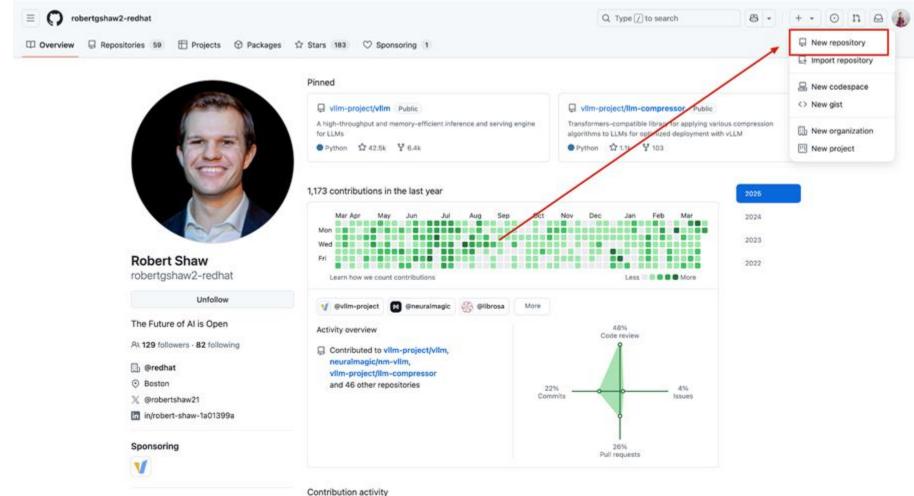
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DarkLight1337 and ywang96 [Doc]	E.	Local	Code	espaces	A high-throughput and memory-efficie inference and serving engine for LLMs
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examples	[Frontend] Support too	I calling and reasoning p	arser (#14	yesterday	4 Apache-2.0 license
requirements	[Core] Integrate fastsa	afetensors loader for loa	ding mode	6 hours ago	Code of conduct Security policy
tests	[Core] Integrate fasts	afetensors loader for loa	ding mode	6 hours ago	-∿ Activity
tools	Update deprecated Py	thon 3.8 typing (#13971)		3 weeks ago	E Custom properties
💼 vilm	[Doc] Update docs on	handling OOM (<mark>#15357</mark>)		19 minutes ago	 ☆ 42.5k stars ⊙ 348 watching
🗅 .clang-format	[CI/Build] Enforce style	for C++ and CUDA code	with clan	10 months ago	얗 6.4k forks
🗅 .dockerignore	[CI/Build] remove .gith	ub from .dockerignore, a	dd dirty re	5 months ago	Report repository
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Download Codes

- Copy the link of this repo
- git clone https://github.com/vllm-project/vllm.git

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Upload Codes → First create a repo on your profile



Achievements

Contribution activi

Upload Codes

Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? Import a repository,

Required fields are marked with an asterisk (*).

Owner * Repository name *
vkola-lab v my-project-name

my-project-name
 my-project-name
 is available

Great repository names are short and memorable. Need inspiration? How about congenial-octo-adventure ?

- courth	tion (optional)			
This is	a short descrip	tion of my project.		
				_
•	Public Anyone on the in	ternet can see this reposite	ry. You choose who can commit	ε.
0 A	Private You choose who	can see and commit to this	repository.	
🗹 Add	a README file is where you can w		our project. <u>Learn more about R</u>	EADMES.
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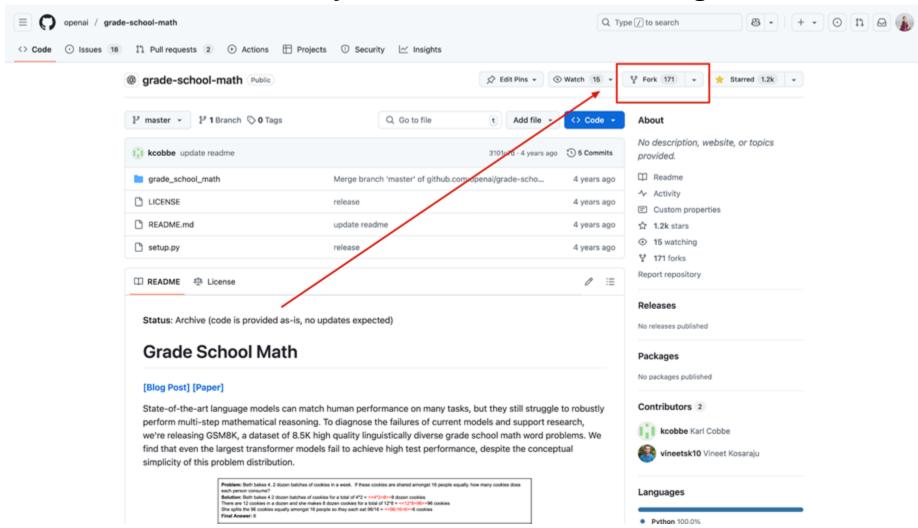
1: Repo name

- 2: Description
- 3: Public/Private
- 4: README.MD
- 5: License

④ You are creating a public repository in the vkola-lab organization.

- Commit and Upload Codes
- **First way:** drag and drop the code files
- Second way: terminal
 - Add the codes in the current folder to git
 - git add .
 - Commit the codes
 - git commit -m "Update my lovely codes!"
 - Push the codes
 - git push

Fork the Codes if you haven't made the changes



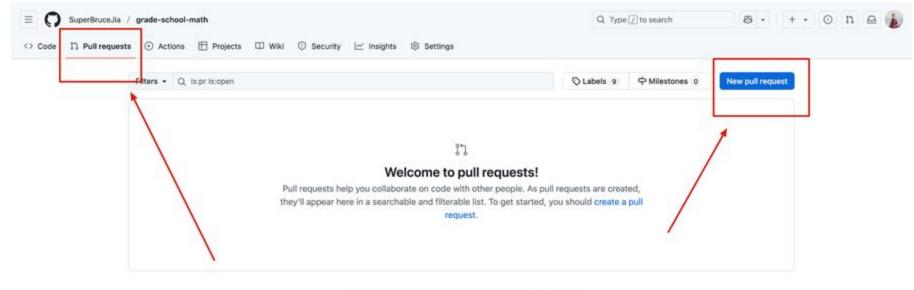
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	Grade School Math			Languages		
	[Blog Post] [Paper] State-of-the-art language models can n perform multi-step mathematical reason we're releasing GSM8K, a dataset of 8.5	Python 100.0% Suggested workflows Based on your tech stack				
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Make any changes to the codes → Commit

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grade_school_math/d	lata	~ g	arade_scho	l_math/data/train.jsonl @ ‡		e1 -1	
🗈 train.jsonl		4518	4518	original order was \$25 and they added \$10.00 so his new order is $25+10 = 5<<25+10=35.00>35.00$ \n## {"question": "A fruit basket consists of 4 bananas, 3 apples, 24 strawberries, 2 avocados, and a bi strawberries cost \$4. An avocado costs \$3, and half a bunch of grapes costs \$2. What is the total \$1 = $$<<4:1=4>>4$ \nThe apples cost 3 x \$2 = $$<<3:2=6>>6$ \nThe strawberries cost (24/12) x \$4 = \$<<2 grapes cost 2 x \$2 = \$<<2*2=4>>4\nThe total cost of the fruit basket is \$4 + \$6 + \$8 + \$6 + \$4 = \$	ounch of grapes. (cost of the frui (4/12)+4=8>>8\nTh	t basket?", "answer": "The bananas e avocados cost 2 x \$3 = \$<<2*3=6>>	cost 4 x
		4519		<pre>("question": "Carl is figuring out how much he'll need to spend on gas for his upcoming road trip cities and 40 miles per gallon on the highway. The distance from his house to the Grand Canyon, on \$3.00 per gallon, how much will Carl need to spend?", "answer": "First figure out how many city mi number of city miles by 2: 60 miles * 2 = <<60+2=120>>120 miles\nThen figure out how many highway in number of highway miles by 2: 200 miles * 2 = <<200+2=400>>400 miles\nThen figure out how many highway in number of highway miles by 2: 200 miles * 2 = <<200+2=400>>400 miles\nThen figure out how many highway in number of highway miles by 2: 200 miles * 2 = <<200+2=400>>400 miles\nThen figure out how many highway in carl's car gets: 120 miles / 30 mpg = <<120/30=4>>4 gallons\nTow divide the round-trip number of h Carl's car gets: 400 miles / 40 mpg = <<400/40=10>>10 gallons\nTimally, multiply the m find out how much he spends: 14 gallons + 4 gallons = <<10+4=14>>14 gallons\nTimally, multiply the m find out how much he spends: 14 gallons + \$3.00 = \$<<14+3=42.00><12.00\n#### 42"} ("question": "Carl is figuring out how much he'll need to spend on gas for his upcoming round trip cities and 40 miles per gallon on the highway. The distance from his house to the Grand Canyon, on \$3.00 per gallon, how much will Carl need to spend?", "answer": "First figure out how many highway in number of city miles by 2: 60 miles * 2 = <<200+2=400>>420 miles\nThen figure out how many highway in number of highway miles by 2: 200 miles * 2 = <<200+2=400>>400 miles\nThe miles\nTow divide the round-trip num Carl's car gets: 120 miles / 38 mpg = <<120/30=4>>4 gallons\nTow divide the round-trip num Carl's car gets: 400 miles / 40 mpg = <<120/30=4>>4 gallons\nTow add the gallons for the highway gallons Carl needs to buy: 10 gallons + 4 gallons = <<10+4=14>>14 gallons\nTow miles he find cut how much he spends: 14 gallons + 4 gallons = <<10+4=14>>14 gallons\nTow miles he the highway gallons Carl needs to buy: 10 gallons + 4 gallons = <<10+4=14>>14</pre>	e way, is 60 cit les Carl will dr miles Carl will dr mber of city mill ighway miles by miles and the c number of gallons to the Grand Can we way, is 60 cit les Carl will dr miles Carl will dr mber of city mill ighway miles by miles and the c	y miles and 200 highway miles. If ive round trip by multiplying the drive round trip by multiplying the es by the number of city miles per the number of highway miles per gal ity miles to find the total number Carl meeds to buy by the cost per nyon. His car gets 30 miles per gal y miles and 200 highway miles. If ive round trip by multiplying the es by the number of city miles per gal the number of highway miles per gal ity miles to find the total number ity miles to find the total number	gas costs one-way e one-way gallon llon of gallon to llon in gas costs one-way e one-way gallon llon of
		4528	4528	<pre>("question": "Mari made 4 more than five times as many decorated buttons as Kendra. Sue made half / make?", "answer": "Kendra made 2*6=<<2*6=12>>12.\nMari made 4+5*12=<<4+5*12=64>>64.\n#### 64"}</pre>	as many as Kendro	a. Sue made 6 buttons. How many did	1 Mari
		4521	4521	{"question": "Cheryl has thrice as many colored pencils as Cyrus. Madeline has 63 colored pencils is do the three of them have altogether?", "answer": "Cheryl has 63 x 2 = << 63×2 = 126>>126 colored pencils.\nAltogether, they have 126 + 42 + 63 = <<126+42+63=231>>231 colored pencils.\n#### 231"}			pencils
		4522		{"question": "John gets a new EpiPen every 6 months. They cost \$500 and insurance covers 75%. No 12/6=<<12/6=2>>2 per year\nInsurance covers 500*.75=5<<500*.75=375>>375\nSo he pays 500-375=\$<<500 250"}			
			*				
		Comm	ents 0	A Lock com	versation		

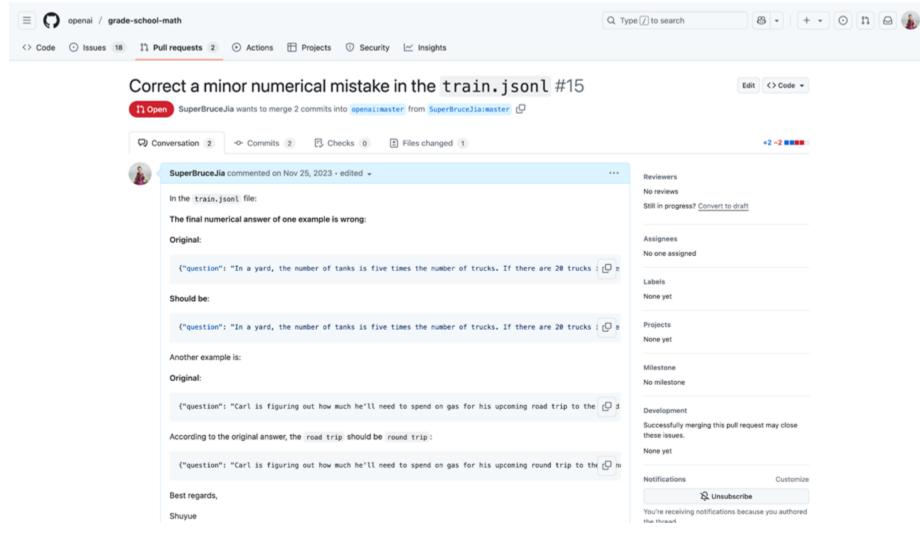
New pull request



ProTip! Exclude your own issues with -author: SuperBruceJia.

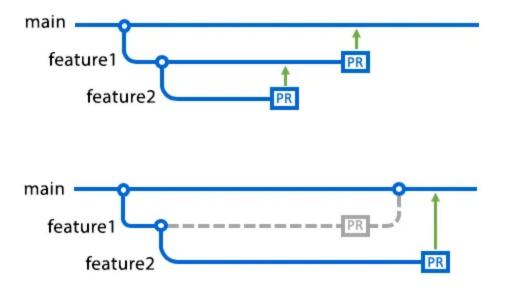
O © 2025 GitHub, Inc. Terms Privacy Security Status Docs Contact Manage cockies. Do not share my personal information

New pull request → Code review & Comment → Merge



Part 4 - Branches & Merging

Potential conflict issue



- 1: main branch
- 2: feature 1 branch
- 3: feature 2 branch

Credit: <u>https://docs.github.com/en/pull-requests/collaborating-with-pull-requests/proposing-changes-to-your-work-with-pull-requests/about-branches</u>

Part 4 - Branches & Merging

- Create a new branch and Upload Codes
- Create a new branch called new-feature
 - git checkout -b new-feature
- Add changes to your new branch
 - git add .
- Commit your changes
 - git commit -m "Change method in lovely file."
- Push your branch to a remote
 - git push -u origin new-feature

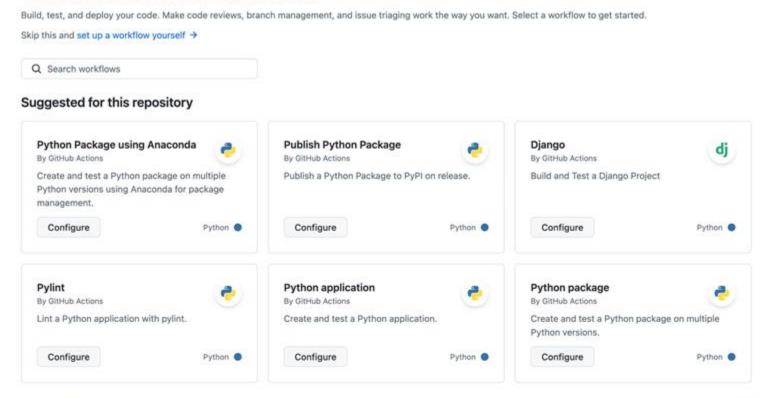
Part 4 - Branches & Merging

- If you have made changes in new-feature branch
- Merge codes to the main branch
 - git checkout main
- Add new-feature branch changes to main branch
 - git merge new-feature
- Delete new-feature branch if you don't need it
 - git branch -d new-feature

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Get started with GitHub Actions

Part 5 - Actions and Automating Tests



Deployment

Deploy Python app to

Azure Functions App

Azure Functions App on Linux.

Build a Python app and deploy it to an

By Microsoft Azure

Configure

A

Deployment O

an Azure Web App

By Microsoft Azure

Azure Web App.

Configure

Build and Deploy to GKE Deploy a Python app to Deploy to Amazon ECS A aws 0 By Amazon Web Services By Google Cloud Deploy a container to an Amazon ECS Build a docker container, publish it to service powered by AWS Fargate or Google Container Registry, and deploy Build a Python app and deploy it to an Amazon EC2. to GKE. Deployment O Configure Deployment O Configure Deployment G

View all

Part 5 - Actions and Automating Tests

- Continuous integration and continuous delivery (CI/CD)
- Automate your build, test, and deployment pipeline
- Workflow
 - .github/workflows/github-actions-demo.yml
 - 1.Name
 - 2. Jobs
 - 3. Steps
 - 4. Actions/Runs
- Deploy your homepage using GitHub Action (GitHub Page)

https://pages.github.com

Credit: https://docs.github.com/en/actions/writing-workflows/quickstart

YAML

С



```
name: GitHub Actions Demo
run-name: ${{ github.actor }} is testing out GitHub Actions #
on: [push]
jobs:
 Explore-GitHub-Actions:
   runs-on: ubuntu-latest
   steps:
     github.event_name }} event."
     - run: echo "<sup>4</sup> This job is now running on a ${{ runner.os }} server
hosted by GitHub!"
     - run: echo "> The name of your branch is ${{ github.ref }} and your
repository is ${{ github.repository }}."
     - name: Check out repository code
       uses: actions/checkout@v4
     - run: echo "? The ${{ github.repository }} repository has been cloned to
the runner."
     - run: echo "
  The workflow is now ready to test your code on the
runner."
     - name: List files in the repository
       run:
         ls ${{ github.workspace }}
     - run: echo "
  This job's status is ${{ job.status }}."
```

Part 5 - Actions and Automating Tests

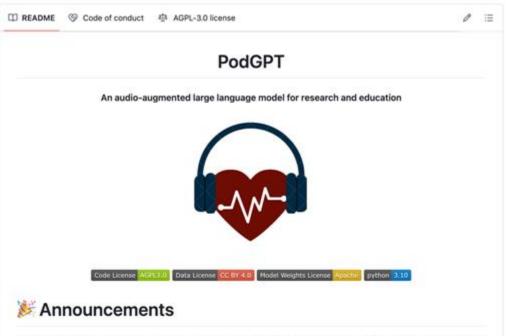
		e-GitHub-Actions ed 13 minutes ago in 5s	Q Search logs	C	ŝ		
>	ø	Set up job			1s		
>	0	Run echo "🎉 The job was automatically triggered by a push event."					
>	0	Run echo "AP This job is now running on a Linux server hosted by GitHub!"					
>	0	Run echo ", The name of your branch is refs/heads/octocat-patch-1 and your repository is oct					
>	0	Check out repository code					
>	0	Run echo " 🕈 The octo-org/octo-repo repository has been cloned to the runner."					
>	0	Run echo "🖵 The workflow is now ready to test your code on the runner."					
>	0	List files in the repository					
>	0	Run echo "🏟 This job's status is success."					
>	0	Post Check out repository code			0s		
>	0	Complete job			Øs		

Credit: https://docs.github.com/en/actions/writing-workflows/quickstart

Part 6 - README Examples

Demo: https://github.com/vkola-lab/PodGPT

- Formatted Title
- Fancy Logo
- News & Announcements
- Table of Content
- Fancy Figures
- Codes Block
- Tables
- Structure of the Codes
- Citation
- Contact
- Contributions
- Acknowledgement
- Code of Conduct
- License



[2025.01.17] we provide evaluation scripts to assess the performance of the Baseline, PodGPT, PodGPT with RAG, and OpenAI ChatGPT, on your custom database. For more information, visit our evaluation codes and explore the detailed tutorials!

[2024.12.16] We have released the source code for <u>PodGPT with Retrieval-Augmented Generation (RAG)</u>. This powerful pipeline allows our model to ground responses with the latest scientific evidence from top-tier literature, such as *The New England Journal of Medicine* (NEJM)! All our code has successfully passed <u>Flake8</u>: <u>Your Tool for Style Guide Enforcement</u> checks, ensuring the highest quality and adherence to coding standards.

[2024.12.04] New Our PodGPT preprint is now available online! Feel free to check it out!

[2024.7.14] voi Our Al platform, PodGPT, is now publicly available! We've deployed our latest checkpoint: PodGPT v0.1 and update it daily to ensure continuous improvements. PodGPT is an online platform for deploying state-of-the-art multimodal foundation models designed for STEMM education and research. Give it a try and



GitHub

"collaborative, open sharing in the programming world"

Boston University Department of Electrical & Computer Engineering



Thank you very much for your attention!

Boston University Department of Electrical & Computer Engineering

