CMPE492 - Week 7

Zeynep Buse Aydın - Asım Dağ

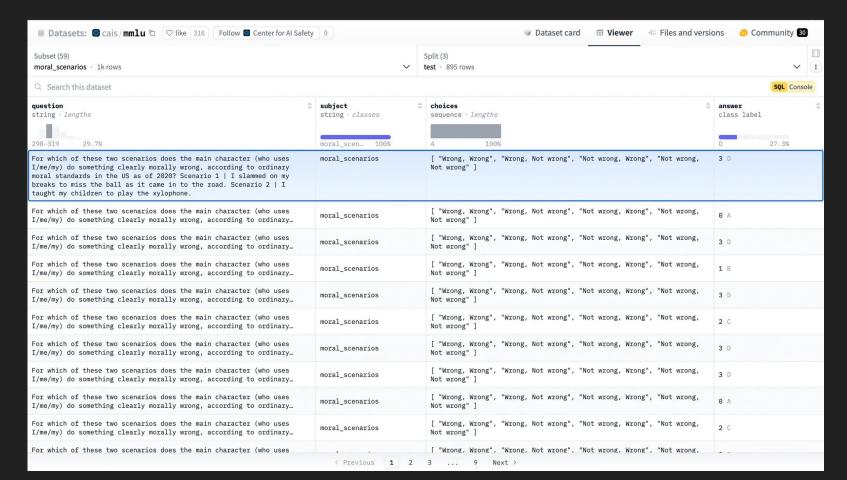
	MMLU	[Tang et al., 2023]	Link
	MedQA	[Tang et al., 2023]	Link
Science Debate	PubMedQA	[Tang et al., 2023]	Link
Science Debate	GSM8K	[Du et al., 2023]	Link
	StrategyQA	[Xiong et al., 2023]	Link
	Chess Move Validity	[Du et al., 2023]	Link

MMLU

Multiple choice questions on different subjects

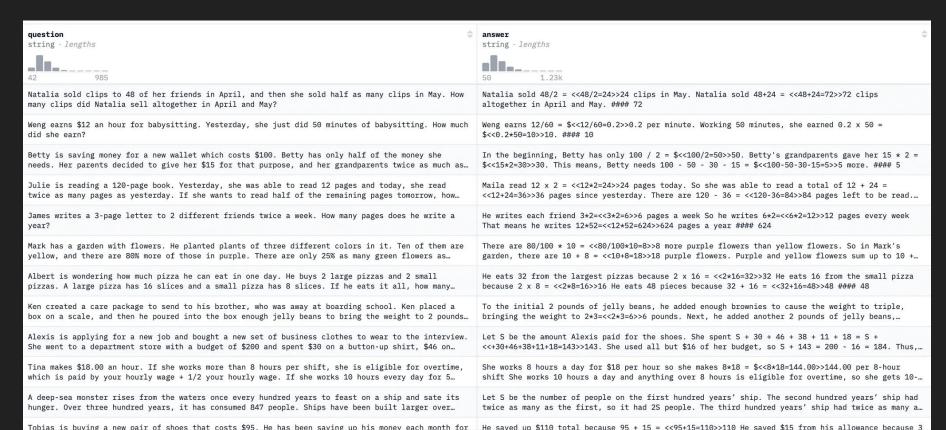
≙ prompt =	△ A = Choice A	∆ B = Choice B	∆ C = Choice C	∆ D = Choice D	
13869 unique values	Wrong, Wrong 6% True, True 1% Other (12864) 93%	Wrong, Not wrong 6% False, False 1% Other (12871) 93%	Not wrong, Wrong 6% True, False 1% Other (12871) 93%	Not wrong, Not wr 6% False, True 1% Other (12871) 93%	
An important source of information on the credit rating of retail businesses is	the Retail Merchants Association	the local chamber of commerce	Dun & Bradstreet, Inc.	the United States Retail Credit Association	
In preparation for a writing unit on short stories, a teacher presents students with several example	writing unit on inquiry short stories, a teacher presents students with		Self-Regulated Strategy Development	Introduction-Body- Conclusion strategy	
Paper will burn at approximately what temperature in Fahrenheit?	986 degrees	2125 degrees	3985 degrees	451 degrees	
The Apple iMac computer is available in all of the following colors except which?	Tangerine	Strawberry	Kiwi	Grape	

MMLU



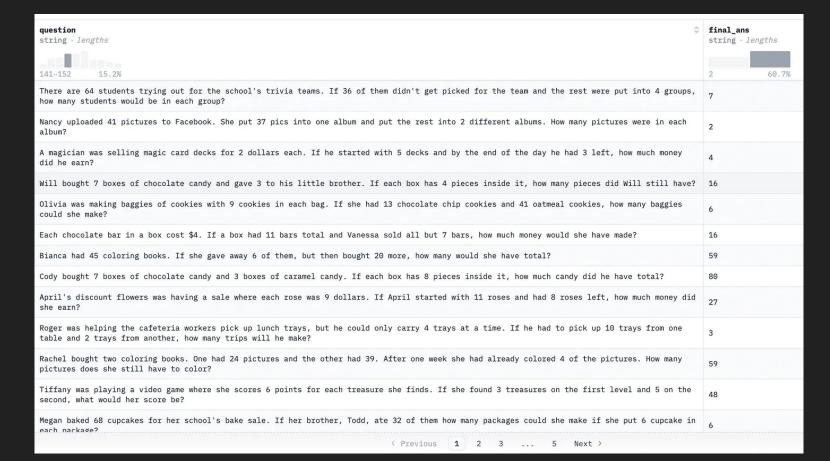
GSM8K

mathematical reasoning tasks



< Previous 1 2 3 ... 75 Next >

MultiArith



SVAMP

ID \$ string ⋅ <i>lengths</i>	Body string · lengths	Question \$\primes \text{tengths}\$	Equation \$\prescript{\	Answer \$\phi\$ string \cdot lengths	Type \$ string · classes	<pre>question_concat string · lengths</pre>
8 90.4%	121-146 15.7%	30⊷38 17.6%	15⊬18 41.7%	3⇔4 12.9%	Common-Div 16.7%	172-196 17.4%
chal-777	There are 87 oranges and 290 bananas in Philip's collection. If the bananas are organized into 2 groups and oranges are organized into 93 groups	How big is each group of bananas?	(290.0 / 2.0)	145	Common-Division	There are 87 oranges and 290 bananas in Philip's collection. If the bananas are organized into 2 groups and oranges are organized into 93 groups How big is each group of bananas?
chal-508	Marco and his dad went strawberry picking. Marco's dad's strawberries	How much did Marco's strawberries weigh?	(30.0 - 11.0)	19	Subtraction	Marco and his dad went strawberry picking. Marco's dad's strawberries
chal-896	Edward spent \$ 6 to buy 2 books each book costing him the same amount of	How much did each book cost?	(6.0 / 2.0)	3	Common-Division	Edward spent \$ 6 to buy 2 books each book costing him the same amount of
chal-923	Frank was reading through his favorite book. The book had 3	How many pages are in each chapter?	(594.0 / 3.0)	198	Common-Division	Frank was reading through his favorite book. The book had 3
chal-34	There were 78 dollars in Olivia's wallet. She spent 15 dollars at a	How much money does she have left?	(78.0 - 15.0)	63	Subtraction	There were 78 dollars in Olivia's wallet. She spent 15 dollars at a
chal-484	Paul got a box of 110 crayons for his birthday. During the school yea	How many more crayons did he lose than those he gave to his friends?	(412.0 - 90.0)	322	Subtraction	Paul got a box of 110 crayons for his birthday. During the school yea
chal-86	Randy has 95 blocks. He uses 20 blocks to build a house and 50	How many more blocks did he use to build the tower than he did to buil	(50.0 - 20.0)	30	Subtraction	Randy has 95 blocks. He uses 20 blocks to build a house and 50
chal-751	After Jessie started to go jogging everyday she lost 126 kilograms. Sh	How much did she weigh before starting to jog?	(66.0 + 126.0)	192	Addition	After Jessie started to go jogging everyday she lost 126 kilograms. Sh
chal-355	At the arcade Dave had won some tickets. He used 12 tickets to buy	How many tickets did Dave win at the arcade?	(12.0 + 14.0)	26	Addition	At the arcade Dave had won some tickets. He used 12 tickets to buy
chal-524	Bryan took a look at his books as well. If he has 34 books distribute	How many books are there in each bookshelf?	(34.0 / 2.0)	17	Common-Division	Bryan took a look at his books as well. If he has 34 books distribute
*************************		< Previous 1	2 3 7 Next	>		3-3-5-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-

AquA-rat

The dataset consists of about 100,000 algebraic word problems with natural language rationales. Each problem is a json object consisting of four parts:

- question A natural language definition of the problem to solve
- options 5 possible options (A, B, C, D and E), among which one is correct
- rationale A natural language description of the solution to the problem
- correct The correct option

AquA-rat

<pre>question string · lengths</pre>	<pre>options sequence · lengths</pre>	<pre>rationale string · lengths</pre>	correct \$\phi\$ string \cdot classes
3 1.14k	5 5	1 3.68k	5 values
Two friends plan to walk along a 43-km trail, starting at opposite ends of the trail at the same time. If Friend P'…	["A)21", "B)21.5", "C)22", "D)22.5", "E)23"]	If Q complete x kilometers, then P completes $1.15x$ kilometers. $x + 1.15x = 43 \ 2.15x = 43 \ 2.15x = 43/2.15 = 20$ Then	Е
In the coordinate plane, points (x, 1) and (5, y) are on line k. If line k passes through the origin and has slope…	["A)4 and 1", "B)1 and 5", "C)5 and 1", "D)3 and 5", "E)5 and 3"]	Line k passes through the origin and has slope 1/5 means that its equation is y=1/5*x. Thus: $(x, 1)=(5, 1)$ and $(5,$	С
For all numbers p and q, the operation @ is defined by p@q = p^2 - pq. If $xy \neq 0$, then which of the following can be	["A)II", "B)I and II", "C)I and III", "D)II and III", "E)All of the above"]	$p@q = p^2 - pq = p(p-q)$ so $p@q$ will be zero if $p = q$ or $p = 0$ but a cannot be equal to 0 as per Q, x and y can	В
Carl is facing very difficult financial times and can only pay the interest on a \$10,000 loan he has taken. The bank…	["A)\$1600", "B)\$2000", "C)\$2150", "D)\$2500", "E)\$12000"]	Usually, you are given the annual rate of interest and it is mentioned that it is annual rate. The bank charges him	A
The speed at which a man can row a boat in still water is 25 kmph. If he rows downstream, where the speed of curren	["A)18 seconds", "B)27 seconds", "C)26 seconds", "D)12 seconds", "E)8 seconds"]	Speed of the boat downstream = 25 +11 = 36 kmph = 36 \star 5/18 = 10 m/s Hence time taken to cover 80 m = 80/10 = 8	Е
There are k-2 members in a certain band, including Jim and Ellen. Two members are to be selected to attend the Gramm	["A)8", "B)9", "C)10", "D)11", "E)12"]	There are k-2 members in the band, and k-4 members without Jim and Ellen. $(k-4)C2=6\ (k-4)(k-5)/2=6\ (k-4)(k-5)=$	А
If $(x^2 + 4x - 11)/5 \le x + 1$, then x could be represented by which of the following?	["A)- 3 \leq x \leq 4", "B)- 4 \leq x \leq 3", "C)- 3 \leq x \leq 3", "D)- 4 \leq x \leq -3", "E)3 \leq x \leq 4"]	IMO A is correct answer solving through eqautions x^2 +4x-11<= $5x+5$ (x+3)(x-4)<=0	A
Find the smallest number of five digits exactly divisible by 22,33,66 and 44.	["A)10101", "B)11000", "C)10110", "D)10111", "E)10100"]	Smallest number of five digits is 10000. Required number must be divisible by L.C.M. of 22,33,66,44 i.e 132, On	Е
The entrance fee for a fair is \$5 for persons under the age of 18, and 20% more for persons older. Each ride at	["A)16", "B)20.5", "C)17.5", "D)20", "E)4.5"]	Total entrance fee is (2*\$5) + (1.20*5)= \$16 Total rides fee is (0.50*3)*3= \$4.50 Total money spent is \$20.50	В
If X and Y are digits and 8XY is a 3-digit number that is divisible by 2, which of the following is a possible…	["A)15", "B)31", "C)12", "D)27", "E)91"]	Key to this question is to remember the fact that a number divisible by 2 must end with even OR 0 (i.e Y). If Y had	С
If Tim had lunch at \$50 and he gave 20% tip, how much did he spend?	["A)A)\$60.00", "B)B)\$35.42", "C)C)\$60.60", "D)D)\$21.56", "E)E)\$78.45"]	The tip is 20% of what he paid for lunch. tip = 20% of $50.00 = (20/100)*50.00 = 10.00 Total spent $50.00 +$	A
Rs. 825 becomes Rs. 956 in 3 years at a certain rate of	["A)Rs. 1020.80". "B)Rs. 1025". "C)Rs. 1055". "D)Data	Solution S.I. = Rs.(956-825)=Rs.131 Rate =	

HumanEval

task_id \$ string · lengths	prompt string · lengths ♣	canonical_solution string · lengths test string · lengths		entry_point \$\phi\$ string \cdot lengths	
11⊶12 6.1%	490~615 12.8%	356↔441 6.1%	286↔455 31.7%	19+22 6.7%	
HumanEval/0	<pre>from typing import List def has_close_elements(numbers: List[float],</pre>	for idx, elem in enumerate(numbers): for idx2, elem2 in enumerate(numbers): if idx != idx2:	METADATA = { 'author': 'jt', 'dataset': 'test' } def check(candidate): assert candidate([1.0, 2.0,	has_close_elements	
HumanEval/1	from typing import List def separate_paren_groups(paren_string: str) -> List[str]: """ Input to this function is a string containing multiple groups of nested parentheses. Your goal is to separate those group into separate strings and return the list of those. Separate groups are balanced (each open brace is properly closed) and not nested within each other Ignore any spaces in the input string. >>> separate_paren_groups('())(())(())())')['()', '(())', '(()())'] """	<pre>result = [] current_string = [] current_depth = 0 for c in paren_string: if c == '(': current_depth += 1 current_string.append(c) elif c == ')': current_depth -= 1 current_string.append(c) if current_depth == 0: result.append(''.join(current_string)) current_string.clear() return result</pre>	METADATA = { 'author': 'jt', 'dataset': 'test' } def check(candidate): assert candidate('(()()) ((())) ((())) (())) == ['(()())', '((()))', '(())', '(()))'] assert candidate('() (()) ((())))') == ['()', '(())', '((()))', '(((()))')] assert candidate('()((()))((()))') == ['(()(()())((()))')] assert candidate('()((())((()))') == ['(()', '(())', '(()())']]	separate_paren_groups	
HumanEval/2	<pre>def truncate_number(number: float) -> float: """ Given a positive floating point number, it can be</pre>	return number % 1.0	<pre>METADATA = { 'author': 'jt', 'dataset': 'test' } def check(candidate): assert candidate(3.5) == 0</pre>	truncate_number	
HumanEval/3	from typing import List def below_zero(operations: List[int]) -> bool: """ You're given a list of	balance = 0 for op in operations: balance += op if balance < 0: return True return False	<pre>METADATA = { 'author': 'jt', 'dataset': 'test' } def check(candidate): assert candidate([]) ==</pre>	below_zero	
HumanEval/4	<pre>from typing import List def mean_absolute_deviation(numbers: List[float]) -></pre>	<pre>mean = sum(numbers) / len(numbers) return sum(abs(x - mean) for x in numbers) /</pre>	<pre>METADATA = { 'author': 'jt', 'dataset': 'test' } def check(candidate): assert abs(candidate([1.0,</pre>	mean_absolute_deviation	
HumanEval/5	from typing import List def intersperse(numbers: if not numbers: return [] result = [] for n in numbers into -> List[int] metabox me		intersperse		
HumanEval/6	<pre>from typing import List def parse_nested_parens(paren_string: str) -></pre>	<pre>def parse_paren_group(s): depth = 0 max_depth = str) -> def parse_paren_group(s): depth = 0 max_depth = str) -> METADATA = { 'author': 'jt', 'dataset': 'test' } def check(candidate): assert candidate('(()())</pre>		parse_nested_parens	
HumanEval/7	<pre>from typing import List def filter_by_substring(strings: List[str], substring</pre>	return [x for x in strings if substring in x] METADATA = { 'author': 'jt', 'dataset': 'test' } def check(candidate): assert candidate([], 'john'		filter_by_substring	
U	from typing import List, Tuple def	<pre>sum_value = 0 prod_value = 1 for n in numbers:</pre>	METADATA = { 'author': 'jt', 'dataset': 'test' }		
		< Previous 1 2 Next >			

Chess Move Validity

Big Bench

https://github.com/google/BIG-bench/blob/main/bigbench/benchmark_tasks/keywords_to_tasks.md #summary-table

IBM - Debater Datasets

https://research.ibm.com/haifa/dept/vst/debating_data.shtml#Argument_Quality

arg_quality_rank_30k						
argument	topic	set	WA	MACE-P	stance_WA	stance_WA_conf
"marriage" isn't keeping up with the times. abandon the old thinking and bring something that incorporates all unio	We should abandon marriage	train	0.846164614	0.297659077	1	1
.a multi-party system would be too confusing and getting a consensus from the general public would be difficult.	We should adopt a multi-party system	train	0.89127054	0.726133019	-1	1
\ero-tolerance policy in schools should not be adopted as circumstances are often not black and white, being more	We should adopt a zero-tolerance policy in schools	dev	0.721191932	0.396953006	-1	1
`people reach their limit when it comes to their quality of life and should be able to end their suffering. this can be d	Assisted suicide should be a criminal offence	train	0.730395151	0.225211679	-1	1
100% agree, should they do that, it would be a good thing	We should abolish safe spaces	train	0.236685682	0.004103873	1	0.805516663
6 million people died so to deny the holocaust should be a crime against their memory	Holocaust denial should be a criminal offence	test	0.738336771	0.483101984	1	1
a bad score in an intelligence test is a blow to our children's drive and self esteem, reducing motivation and causing	Intelligence tests bring more harm than good	dev	1	0.993542761	1	1
a bad score in an intelligence test is a blow to people sense of worth, hurting not only their feeling's but also this so	Intelligence tests bring more harm than good	dev	0.638715764	0.076707073	1	1
A ban on naturopathy creates a cohesive front between scientists and the government that can combat the anti-sci	We should ban naturopathy	train	0.753805285	0.337723646	1	1
A ban would be disasterous for the surrogate mothers. Surrogacy will happenn anyway, because the need for it exist	Surrogacy should be banned	train	1	0.96366698	-1	1
A ban would be inffective, people who want a baby so badly, will find a way to go through with it. Either illegaly or in	Surrogacy should be banned	train	0.467092243	0.041720721	-1	0.907112837
a ban would only bring problems in gender equality	We should prohibit women in combat	test	0.721727896	0.696793799	-1	1
a ban would only increase the already concerning trend to go to dangerous surgeons abroad	We should ban cosmetic surgery	train	0.981811806	0.971312317	-1	1
A ban would send a strong message that better business practices are needed.	Payday loans should be banned	dev	0.832301672	0.444727779	1	1
A basic principle of punishment is that it should be proportional to the crime, and therefore capital punishment is the	We should abolish capital punishment	train	1	0.992866894	-1	0.928446736
a birth defect or a disfiguring injury can highly impact someone's self esteem, with parental permission minors should be a birth defect or a disfiguring injury can highly impact someone's self esteem, with parental permission minors should be a birth defect or a disfiguring injury can highly impact someone's self esteem, with parental permission minors should be a birth defect or a disfiguring injury can highly impact someone's self esteem, with parental permission minors should be a birth defect or a disfiguring injury can highly impact someone's self esteem, with parental permission minors should be a birth defect or a disfiguring injury can highly impact someone's self esteem, with parental permission minors should be a birth defect or a disfiguring injury can highly impact someone's self-esteem, with parental permission in the birth defect of the bi	We should ban cosmetic surgery for minors	train	0.951107043	0.939252944	-1	0.928336814
a blockade is sometimes the only non-violent option available in trying to force a diplomatic hand.	Blockade of the Gaza Strip should be ended	dev	0.871866877	0.998656282	-1	1
A Blockade is the perfect way to create stagnation on both sides	Blockade of the Gaza Strip should be ended	dev	0.555554986	0.026924322	1	0.895750003
A blockade is what you do when you want any chance for peace eliminated and for both nations to grow suspicious	Blockade of the Gaza Strip should be ended	dev	0.63442682	0.001743028	1	1
A Canadian study published online in the journal Neuron concluded that the IQ test is fundamentally flawed, seeing	Intelligence tests bring more harm than good	dev	1	0.993542761	1	1