Daily Puzzles

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Our Feature: Daily Puzzles

Introduction: We have implemented a 'Daily Puzzles' feature, similar to the ones on sites such as LinkedIn, or the New York Times. However, these puzzles incorporate more logical thinking in line with the programming focus of Fake Stack Overflow. There are two puzzle categories that refresh at midnight every day: CodeNumbers and TruthTable challenge.

CodeNumbers: Fill in a number grid while ensuring each row and column contains unique values, testing logical deduction and pattern recognition.

TruthTable: Correctly determine outputs for logical gate operations: practice ability to solve Boolean algebra!

Scoring: View a score and visual feedback for your puzzle submission. The score is based on accuracy and time taken.

Daily & Global Leaderboard: Daily and global leaderboard showcasing a list and graph of top scores and times!

User Stats: See current streak, highest score, total points earned, and latest completion date for each puzzle!

Future Work

FIrst of all, we would like to implement difficulty levels to each puzzle, especially since our current algorithms are easily customizable and could support this with little effort. We would let users who complete easy puzzles unlock harder ones that award more points.

Additionally, we would love to implement more than 2 puzzles, especially since we have designed a system that could easily support many more! A daily programming challenge puzzle that further encapsulates the spirit of Fake Stack Overflow would be a great next step.
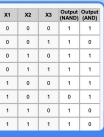
Stack & Design

In order to implement daily puzzles, we had to define several new, interconnected schemas. These include `Puzzle`, `Submission`, `Leaderboard`, and `LeaderboardEntry`. The structure of this data allows for us to program for multiple puzzle types while also sharing common fields used for both types. We handled daily puzzle updates via cron scheduling with a call to the backend puzzle generation. We wrote intuitive algorithms for both puzzle types to generate two unique, challenging puzzles each day with zero hardcoding. Additionally, we utilized the charts.js library to render a dynamic ranking visualization underneath the leaderboard. Check it out!
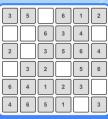
Sources & Demo Link   >**Deployed Project**   >**Repo**

TruthTable

X1	X2	X3	Output (NAND)	Output (AND)
0	0	0	1	1
0	0	1	1	1
0	1	0	1	1
0	1	1	1	1
1	0	0	1	1
1	0	1	0	1
1	1	0	1	0
1	1	1	1	0

Performance Analysis

✅ **Completed!**
Your score: **433 pts**
Great job! Check out the leaderboard.

Score breakdown:
Total inputs: 9
Correct: 7
Accuracy: 77.8%
Base score: 389
Time bonus: 44
Final score: 433

User Stats

Your Stats

Total Points
311

Current Streak
0 days

Highest Score
187

Last Puzzle
4/1/2025

Puzzle Widget

DAILY PUZZLES

New puzzles in...
7 hours 33 minutes

Code Number

Truth Table

CodeNumbers

Global & Daily Leaderboard

Global Leaderboard

		Today	All Time	

Rank	Player	Score	Avg Time
♛	jaber	499	00:00:16
♛	newuuser	498	00:00:15
♛	gigitest	494	00:00:32
4	edemarest	311	00:00:16
5	gdemarest	125	00:00:13
6	test7	111	00:00:12

Total Scores (All Time)