

## SETTING Up CI/CD

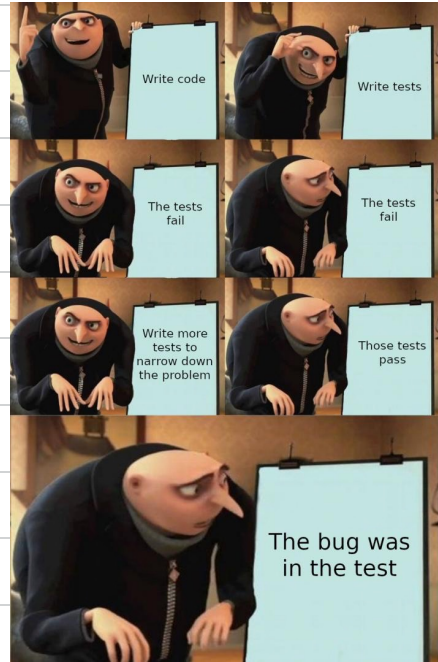
Oct 13, 2025



**Brenan Keller**  
@brenankeller

A QA engineer walks into a bar.  
Orders a beer. Orders 0 beers.  
Orders 999999999999 beers.  
Orders a lizard. Orders -1 beers.  
Orders a ueicbksjdhd.

First real customer walks in and asks where the bathroom is. The bar bursts into flames, killing everyone.



## Write tests



\_\_\_\_\_

Write more tests to narrow down the problem

Those tests  
pass

The bug was in the test

# Agenda

① TESTS!! Wait what??  
What's that?!

② What is CI/CD



**Dave Dustin**  
@venzann

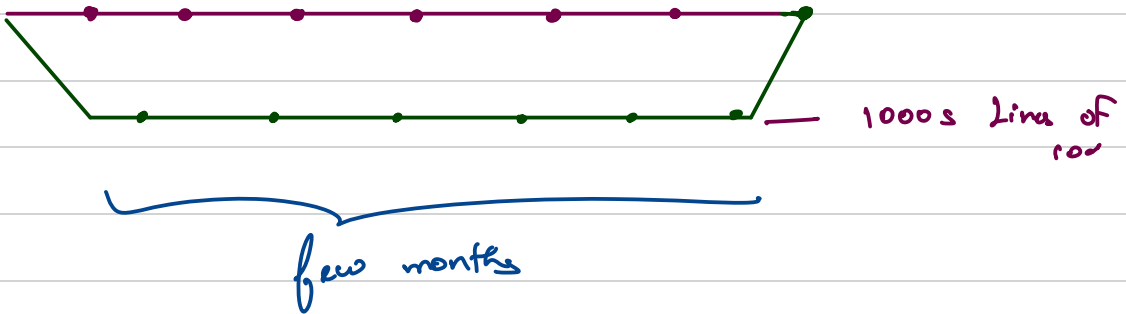
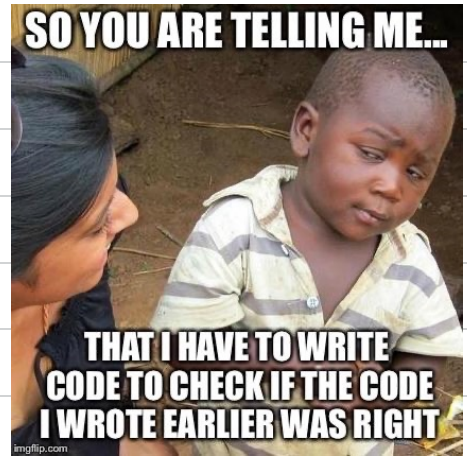
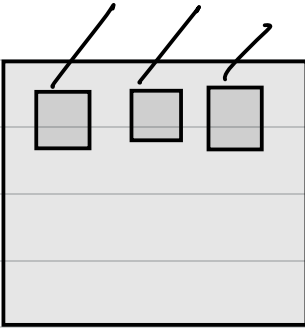
Genie: I'll give you one billion dollars if you can spend 100M in a month. There are 3 rules: No gifting, no gambling, no throwing it away.

SRE: Can I use AWS?

Genie: There are 4 rules.

micro service

TESTS



Fresher SDE (2012) → merge dev branch to main

merge  
deploy

no visitor flights

CR RS



What are some core Objectives of testing.

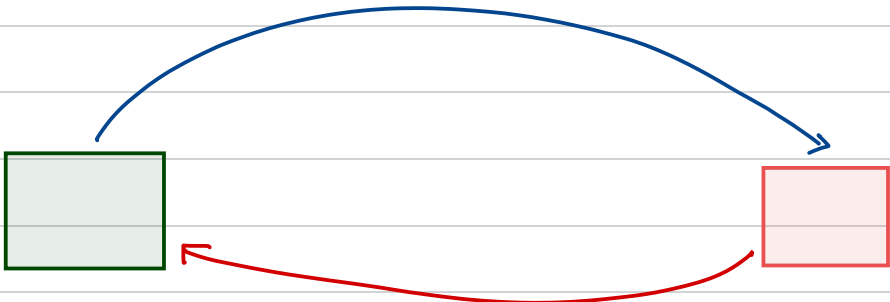
① Entire Codebase should still be functional.

② Accuracy / offline metrics should not go down.

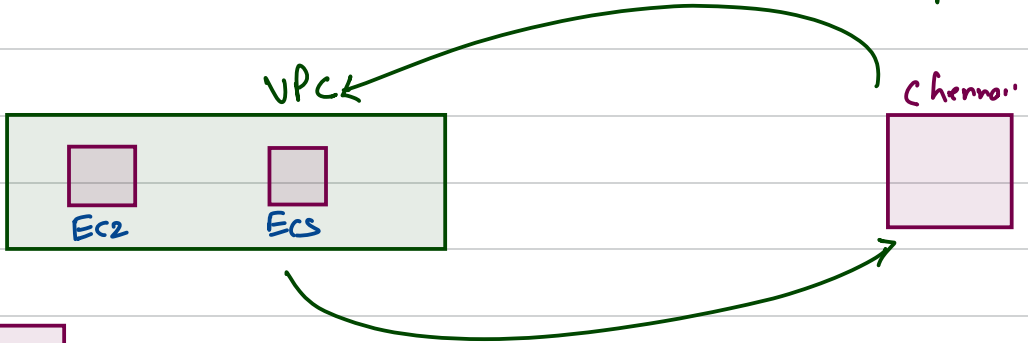
③ Latency should not increase in unexpected way.

④ Data Integrity shouldn't change, unexpectedly.

Latency = Time taken for my computer to send request to the server — 40ms  
+  
Time taken for ML model to generate response — 20ms  
+  
Time taken for response to come to my computer. — 10ms

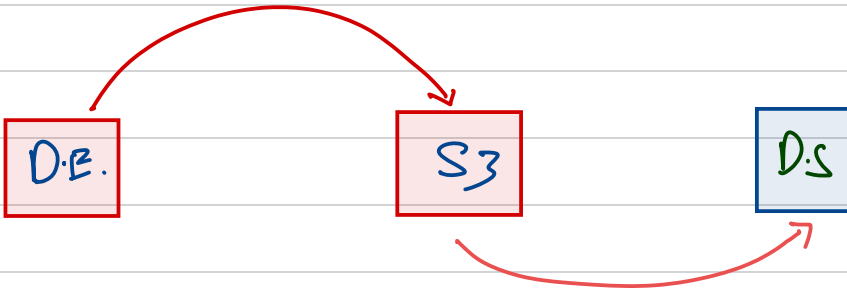


Heaviness of ML model  $\propto$  # of <sup>weight</sup> Parameters



DE.

2025  $\longrightarrow$  2024 ) Dynamic discount

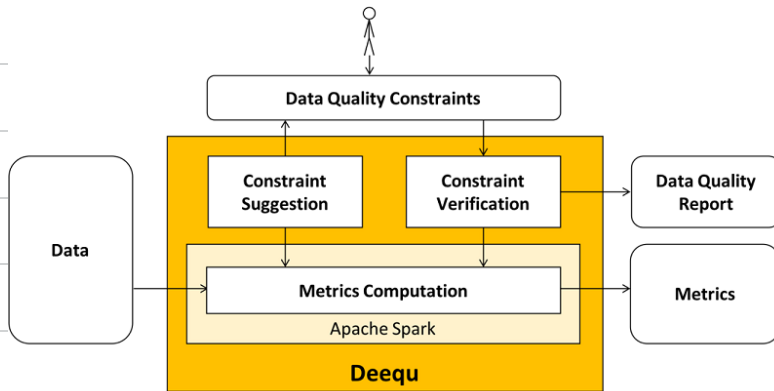


$F_1 \rightarrow 3\%$   
 $\downarrow$   
 $20\%$  } % of Null Value

$F_2 \rightarrow$  Mean-Value  $- 17.$

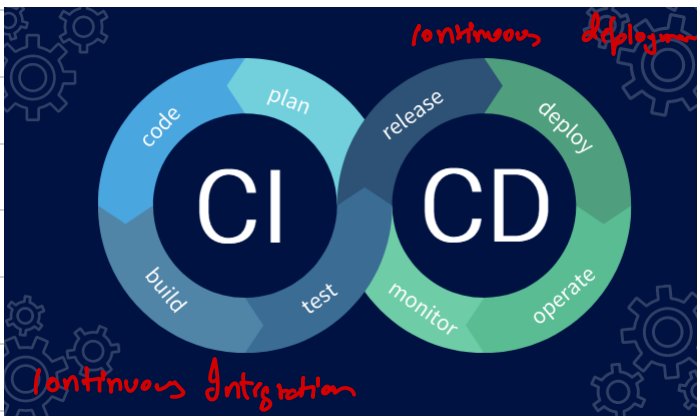
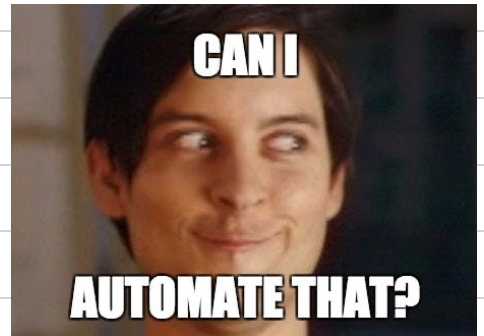
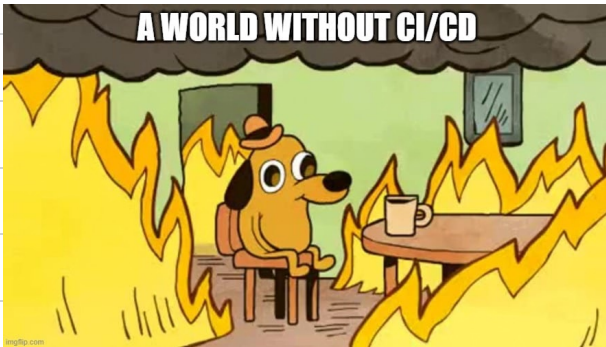
$F_3 \rightarrow (ABC, CAD)$   
 $\hookrightarrow$  (abc, cad)

# Amazon DEE QUE



<https://aws.amazon.com/blogs/big-data/test-data-quality-at-scale-with-deequ/>

# CI/CD



How does Continuous Delivery (CD) differ from Continuous Integration (CI)?

0 users have participated

- ☐ A CD focuses on user interface improvements 0%
- ☒ B CD automates the delivery of completed code to testing and development environments 0%
- ☐ C CI automates the deployment of code changes to production 0%
- ☐ D CI and CD are interchangeable terms 0%

[End Quiz Now](#)

			<div><div>PB</div><div>2</div></div>	<div><div>R</div><div>1</div></div>	<div><div></div><div>3</div></div>
			<div><div>👉 Pooja Bhagwat ...</div><div>1/1 ⚡ 90.40</div></div>	<div><div>👉 Rajesh Sharma</div><div>1/1 ⚡ 97.23</div></div>	<div><div>👉 Rahul Nath</div><div>1/1 ⚡ 88.40</div></div>
4	8	Riddhi Tatke	1/1 ⚡ 87.60		
5	1	lakshmi santhi	1/1 ⚡ 87.16		
6	0	Himanshu Rana	1/1 ⚡ 86.37		
7	0	Parnapalli Siva Kumar	1/1 ⚡ 81.80		
8	0	Surya Prakash	1/1 ⚡ 81.84		
9	0	Manoj Narware	1/1 ⚡ 77.37		
10	0	Saurabh Anunkumar Gupta	1/1 ⚡ 73.86		

What is the primary objective of Continuous Integration (CI) in software development?

0 users have participated

A

Deploying code changes directly into production

0%

B

Automating code delivery to testing environments

0%

✓

C

Identifying and testing code changes frequently

0%

D

Scheduling periodic software updates

0%

End Quiz Now

Quiz Ended!

What is the primary objective of a unit test?

13 users have participated

A

Testing an entire application as a single unit

31%

✓

B

Verifying the behavior of an application module in isolation

62%

C

Analyzing the overall performance of an application

0%

D

Ensuring compatibility with external systems

8%

What are the three key phases typically found in a unit test?

0 users have participated

A

Initializing, executing, and debugging

0%

✓

B

Setup, test execution, and result verification

0%

C

Coding, compiling, and deploying

0%

D

Documentation, validation, and optimization

0%

End Quiz Now

L

2

lakshmi santhi

2/2 ⚡ 176.96

R

1

Rahul Nath

2/2 ⚡ 178.30

SP

3

Surya Prakash

2/2 ⚡ 175.18

4

RT

Riddhi Tatke

2/2 ⚡ 175.06

5

V

Vinay Yelanadu

2/2 ⚡ 159.63

6

SA

Saurabh Arunkumar Gupta

2/2 ⚡ 145.59

7

R

Rajesh Sharma

1/2 ⚡ 97.23

8

SV

Srirangam Vineel Sarma

1/2 ⚡ 92.00

9

P

Pooja Bhagavat Mane

1/2 ⚡ 90.40

10

SC

sarita Chauhan

1/2 ⚡ 86.70

Based on all quizzes from the session

RT

2

Riddhi Tatke

3/3 ⚡ 265.33

R

1

Rahul Nath

3/3 ⚡ 270.03

VY

3

Vinay Yelanadu

3/3 ⚡ 250.90

4

RT

Rajesh Sharma

2/3 ⚡ 192.56

5

L

lakshmi santhi

2/3 ⚡ 176.96

6

SP

Surya Prakash

2/3 ⚡ 175.28

7

SK

Parnapalli Siva Kumar

2/3 ⚡ 174.90

8

SC

sarita Chauhan

2/3 ⚡ 150.16

9

SA

Saurabh Arunkumar Gupta

2/3 ⚡ 145.59

10

SV

Srirangam Vineel Sarma

1/3 ⚡ 92.00

RT

2

Riddhi Tatke

4/4 ⚡ 349.00

R

1

Rahul Nath

4/4 ⚡ 361.63

VY

3

Vinay Yelanadu

4/4 ⚡ 340.72

4

RT

Rajesh Sharma

3/4 ⚡ 287.26

5

SP

Surya Prakash

3/4 ⚡ 263.60

6

L

lakshmi santhi

3/4 ⚡ 257.53

7

SK

Parnapalli Siva Kumar

2/4 ⚡ 174.90

8

M

Manoj Narware

2/4 ⚡ 164.23

9

A

Akalya

2/4 ⚡ 151.74

10

SC

sarita Chauhan

2/4 ⚡ 150.16

Steps we need to follow for performing tests:

1. Decide os: Ubuntu, Mac, or Windows??
2. Installing python and requirements.
3. Performing Tests
4. [Push to DockerHub](#)