

Session - 6

SETTING UP CI/CD

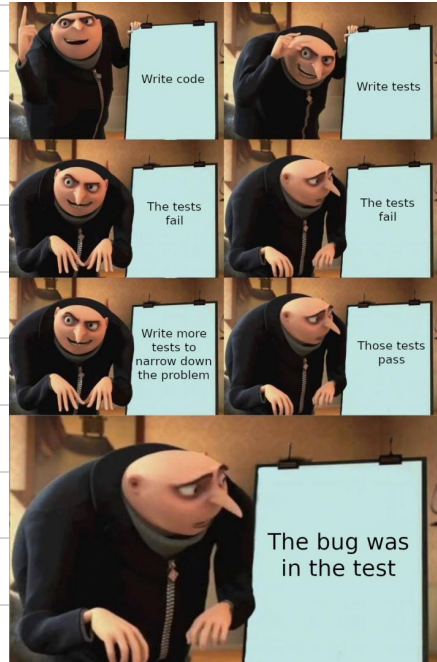
June 16, 2025



Brennan 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.



AGENDA

① TESTS!! Wait what??
What's that?!

② What is CI/CD



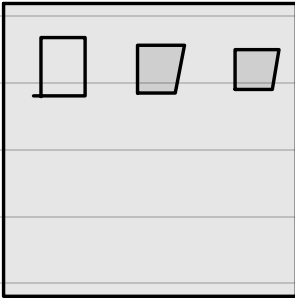
Dave Dustin
@venzann

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.

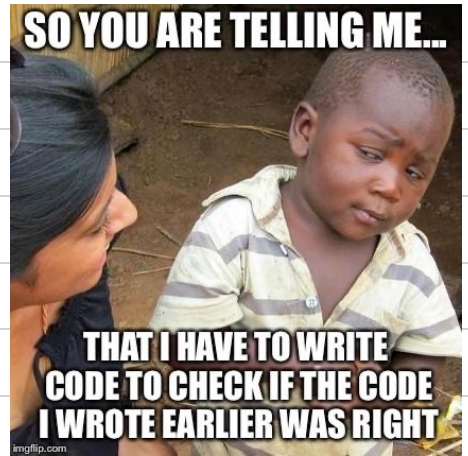
SRE: Can I use AWS?

Genie: There are 4 rules.

TESTS



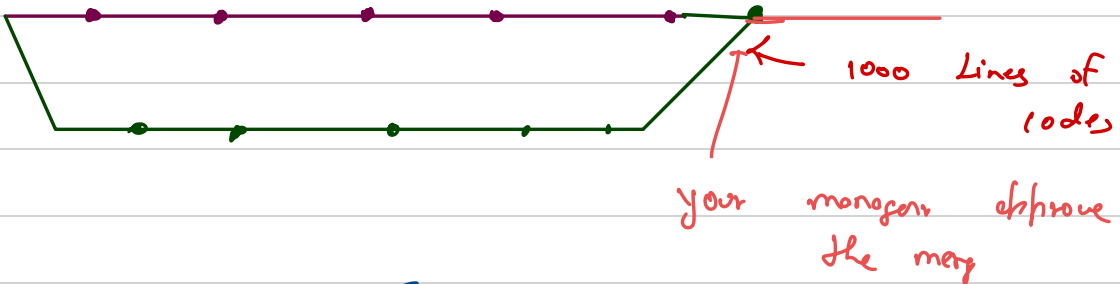
— Google



* Any new Feature

1 year
↓

show up in the end product



Fresher SDE (2018)

merge request / Feature
monop
↓
approval
no visitor flights
8 CR — deployed



What are diff Objectives of testing.

- ① Entire codebase is functional
- ② Accuracy / offline / online metrics doesn't go down.
or bias.
- ③ Latency hasn't increased dramatically.
- ④ Data Integrity hasn't changed.

Latency = Time taken for my comp to send
req to the server

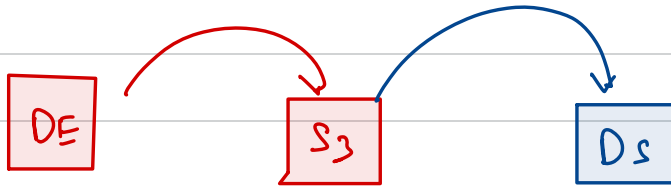
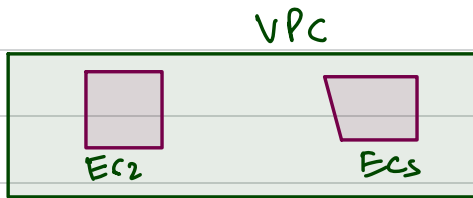
+

Time taken for ML model to generate
response

+

Time taken for server to send
response to my comp



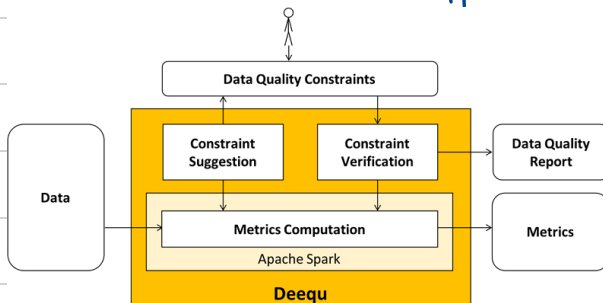


$F_1 \rightarrow 3\%$
 \downarrow
 20%
 $F_2 \rightarrow \text{mean value}$
 \downarrow
 17%

Dynamic pricing/
discounts

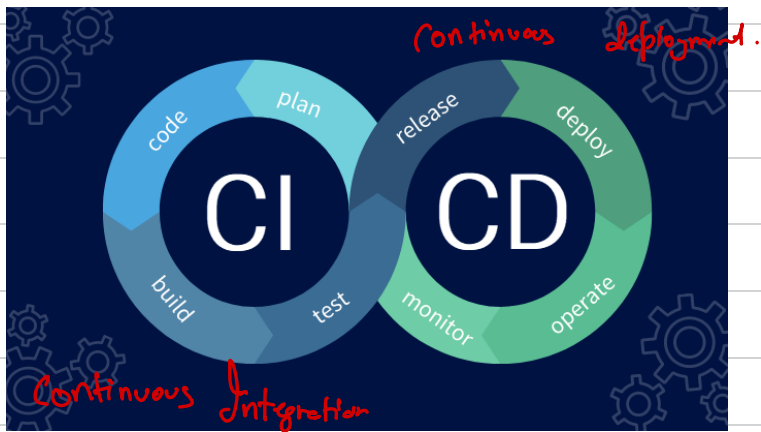
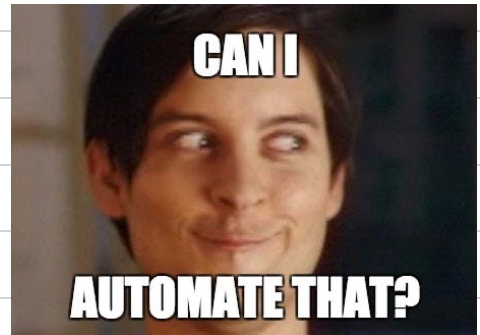
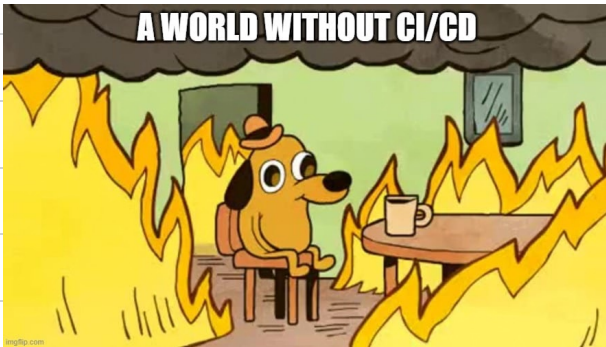
Amazon DEE QU

\hookrightarrow Computes % of Non value & column
 i_1 median Value & column



<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](#)

RS		SK		V	
Renu Singh		Santhosh K		Vanitha	
1/1 ⚡ 93.70		1/1 ⚡ 95.40		1/1 ⚡ 92.03	
4	aniket	1/1	⚡ 91.47		
5	Sonali Ghosh	1/1	⚡ 89.60		
6	Praveen MC	1/1	⚡ 86.83		
7	Rajeev Ranjan Kumar Singh	1/1	⚡ 86.73		
8	Ashwini Uday	1/1	⚡ 85.97		
9	Lokesh Sonawane	1/1	⚡ 82.30		
10	Chirantan Sharma	1/1	⚡ 80.73		

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](#)

What is the primary objective of a unit test?

- 0 users have participated
- A

Testing an entire application as a single unit

0%
- B

Verifying the behavior of an application module in isolation

0%
- C

Analyzing the overall performance of an application

0%
- D

Ensuring compatibility with external systems

0%

[End Quiz Now](#)

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](#)

Leaderboard

Based on all quizzes from the session

<div><div>SG</div><div>2</div></div> <div><div>SK</div><div>1</div></div> <div><div></div><div>3</div></div>			<div><div>👤 Sonali Ghosh</div><div>2/2 ⚡ 178.73</div></div> <div><div>👤 Santhosh K</div><div>2/2 ⚡ 189.20</div></div> <div><div>👤 Praveen MC</div><div>2/2 ⚡ 175.87</div></div>		
4		Rajeev Ranjan Kumar Singh	2/2	⚡ 175.50	
5		Ramdas Vasudev Mangore	2/2	⚡ 160.13	
6		Renu Singh	1/2	⚡ 93.70	
7		Vanitha	1/2	⚡ 92.03	
8		aniket	1/2	⚡ 91.47	
9		Manoj	1/2	⚡ 87.60	
10		Ashwini Uday	1/2	⚡ 85.97	

Leaderboard

Based on all quizzes from the session

<div><div>SG</div><div>2</div></div> <div><div>SK</div><div>1</div></div> <div><div></div><div>3</div></div>			<div><div>👤 Sonali Ghosh</div><div>3/3 ⚡ 271.03</div></div> <div><div>👤 Santhosh K</div><div>3/3 ⚡ 283.83</div></div> <div><div>👤 Rajeev Ranjan K...</div><div>3/3 ⚡ 268.26</div></div>		
4		Praveen MC	3/3	⚡ 257.60	
5		Manoj	2/3	⚡ 175.40	
6		Ashwini Uday	2/3	⚡ 175.33	
7		Chirantan Sharma	2/3	⚡ 171.76	
8		Rajaraman	2/3	⚡ 166.33	
9		Ramdas Vasudev Mangore	2/3	⚡ 160.13	
10		Girish D	2/3	⚡ 131.70	

Leaderboard

Based on all quizzes from the session

<div><div></div><div>2</div></div> <div><div>SK</div><div>1</div></div> <div><div>SG</div><div>3</div></div>			<div><div>👤 Rajeev Ranjan K...</div><div>4/4 ⚡ 362.16</div></div> <div><div>👤 Santhosh K</div><div>4/4 ⚡ 378.50</div></div> <div><div>👤 Sonali Ghosh</div><div>4/4 ⚡ 351.59</div></div>		
4		Ashwini Uday	3/4	⚡ 264.66	
5		Chirantan Sharma	3/4	⚡ 259.72	
6		Rajaraman	3/4	⚡ 259.57	
7		Praveen MC	3/4	⚡ 257.60	
8		Ramdas Vasudev Mangore	3/4	⚡ 246.63	
9		Manoj	3/4	⚡ 239.90	
10		Girish D	3/4	⚡ 197.53	

When a Developer
Finds a Bug

vs

When a Tester
Finds a Bug



That moment when the Developer isn't ready
to accept a Bug raised by the Tester



Steps we need to follow for performing tests:

1. Decide OS - ubuntu, Mac, or windows?
2. Install Python and requirements.
3. Perform Tests
4. [Push to DockerHub](#)