



# FRUGAL TESTING REPORT

NAME

**RICHA YADAV**

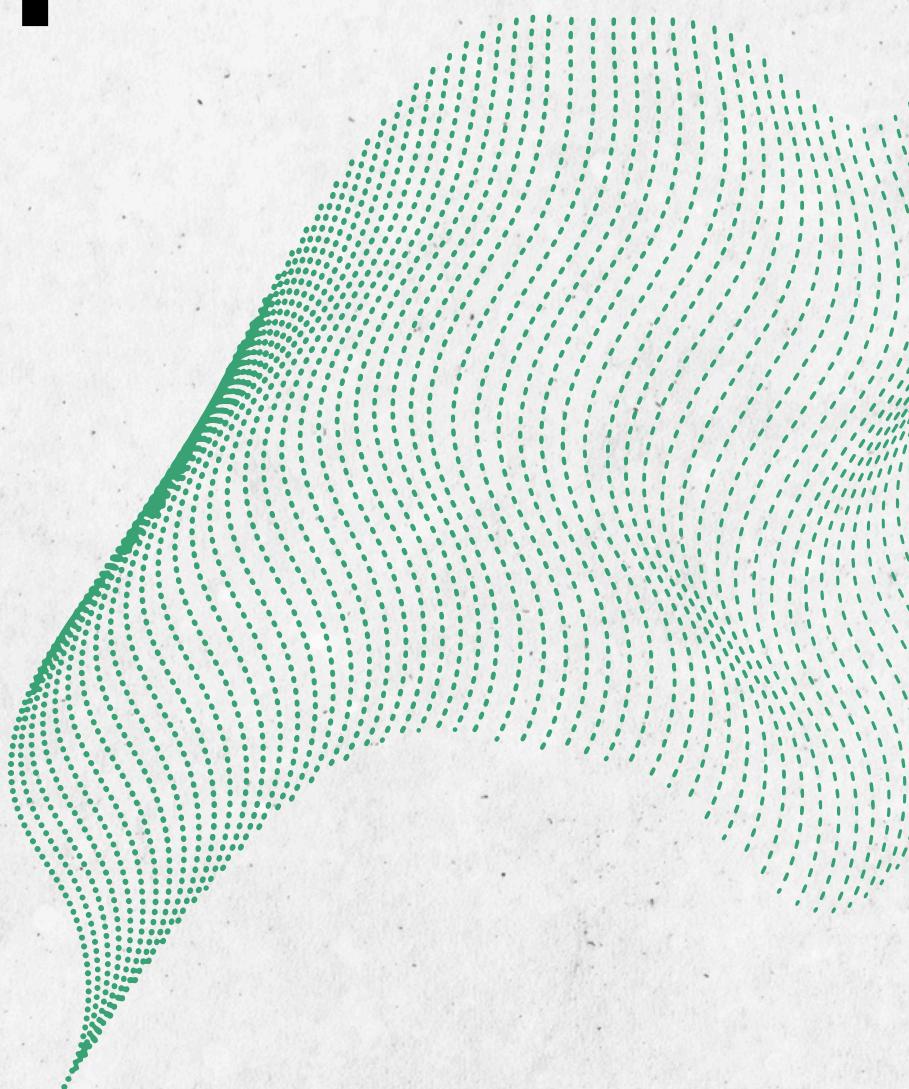
COLLEGE NAME

**UPES DEHRADUN**

ROLL NUMBER

**500097178 /**

**R2142211299**



# MANDATORY QUESTIONS

- Consent to Sign a Bond:
  - Yes, I am comfortable signing a bond for 3 years, including a 1-year internship.
- Stipend and CTC Details:
  - Yes, I have received the stipend and CTC details. The stipend is ₹10-20K per month during the internship, and the CTC post-internship is ₹6L per annum.
- Willingness to Relocate:
  - Yes, I am willing to relocate to Gachibowli, Hyderabad.
- Motivation for Pursuing Software Testing:
  - My motivation for pursuing a career in software testing stems from my passion for quality and precision. I enjoy identifying and solving problems.. The dynamic nature of testing, with its continuous learning and adaptation to new technologies, excites me.
- Why Join Frugal Testing:
  - I want to join Frugal Testing because of its reputation as a trusted partner in testing and DevOps. The company's work environment aligns with my career goals to contribute to and learn from a team that values quality and continuous improvement and enhances DevOps and Agile skillset.

# SECTION A

## CASE 2: AMAZON

- **LINK TO GOOGLE DRIVE VIDEO :** [CLICK HERE](#)

- **Tasks completed-**

- Navigate to <https://www.amazon.in/> Verify landing on the correct page
- Print the URL and Title of the Page
- Search for "mobile"
- Select 4 stars under customer review
- filter section Select the price range between ₹10,000 - ₹20,000
- Click on the first search result
- Add the phone to the cart
- Click on the Go to Cart button

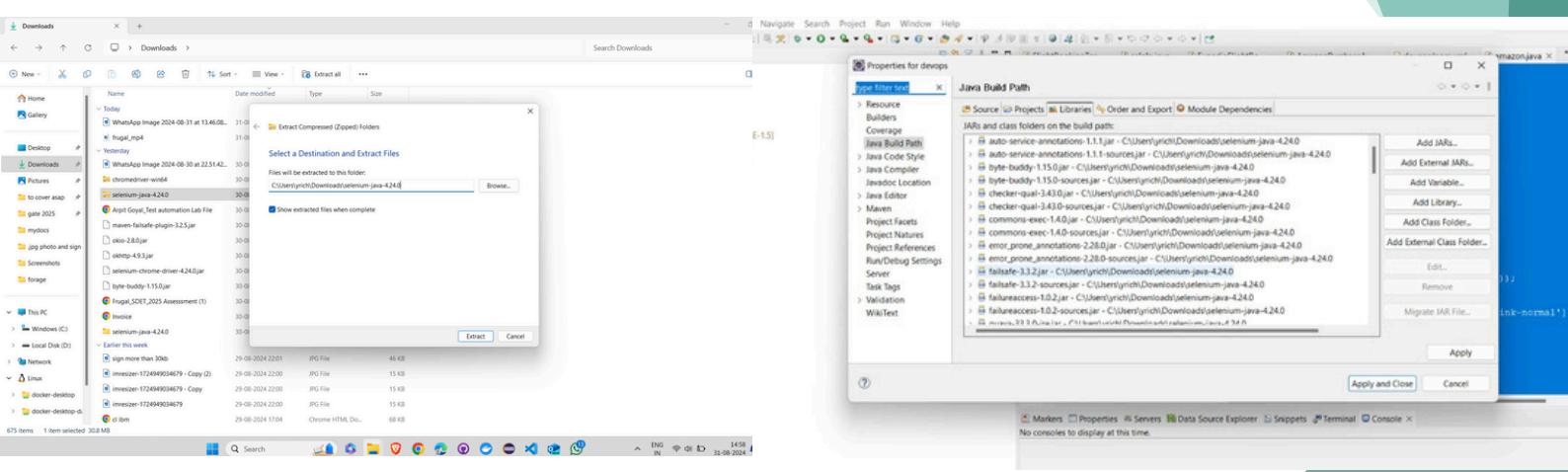
### TOOLS USED –

Programming language: java

web driver: chrome

IDE: Eclipse

1. Downloading selenium latest version and extracting jar files and setting up the system , building path , configuring class path etc.



# SECTION A

## CASE 2: AMAZON

2. writing script :  
giving webdriver exe.file , using try catch finally block , and particular web element to fetch the path

```
1 package devsce2;
2
3 import org.openqa.selenium.By;
4 import org.openqa.selenium.WebDriver;
5 import org.openqa.selenium.WebElement;
6 import org.openqa.selenium.chrome.ChromeDriver;
7 import org.openqa.selenium.interactions.Actions;
8
9 public class sacsc {
10
11     public static void main(String[] args) {
12         // Set the path to the chromedriver executable
13         System.setProperty("webdriver.chrome.driver", "D:\\Test Automation 1\\chromedriver.exe");
14
15         // Initialize the WebDriver
16         WebDriver driver = new ChromeDriver();
17
18         try {
19             // Navigate to Amazon India
20             driver.get("https://www.amazon.in/");
```

```
15         // Initialize the WebDriver
16         WebDriver driver = new ChromeDriver();
17
18         try {
19             // Navigate to Amazon India
20             driver.get("https://www.amazon.in/");
21
22             // Verify landing on the correct page
23             System.out.println("URL: " + driver.getCurrentUrl());
24             System.out.println("Title: " + driver.getTitle());
25
26             // Search for "mobile"
27             WebElement searchBox = driver.findElement(By.id("twotabsearchtextbox"));
28             searchBox.sendKeys("mobile");
29             searchBox.submit();
30
31             // Wait for results to load
32             Thread.sleep(2000);
33
34             // Apply 4-star filter
```

```
77
78         // Click on the Go to Cart button
79         WebElement goToCartButton = driver.findElement(By.id("hlb-view-cart"));
80         goToCartButton.click();
81
82         // Wait for cart update
83         Thread.sleep(2000);
84
85         // Click on the Go to Cart button
86         WebElement goToCartButton = driver.findElement(By.id("hlb-view-cart"));
87         goToCartButton.click();
88
89         // Wait for cart page to load
90         Thread.sleep(2000);
91
92     } catch (Exception e) {
93         e.printStackTrace();
94     } finally {
95         // Close the browser
96         //driver.quit();
```

# SECTION A

## CASE 2: AMAZON

3. hovering website(inspecting) and finding id ,clas ,string ,name or path or full x path

The screenshot shows the Amazon.in search results for "mobile". The search bar at the top has "mobile" typed into it. Below the search bar, there's a product listing for an iPhone 15 (256GB - Green). The iPhone 15 is shown in two different angles. To the right of the phone, there are two price cards: "Apple iPhone 15 (256GB - Green)" priced at ₹2,099 and "Apple iPhone 15 Pro (512GB) - Natural 1" priced at ₹3,177. Both cards mention "prime". The background shows other search filters like "Delivery Day", "Category", "Customer Review", "Brands", and "Price". The right side of the screen shows the browser's developer tools (Elements tab) with the DOM structure for the search bar and the first product listing.

This screenshot is similar to the one above, but the search term in the search bar is now "Phone". The first result is for an iPhone 15 (256GB - Green), which is displayed with its price of ₹2,099 and a "prime" badge. The developer tools on the right show the corresponding HTML code for this product listing.

This screenshot shows a specific product page for the Redmi 13 5G. The phone is shown in a pink color. The page includes details like "6GB+128GB | India Debut SD 4 Gen 2 AE | 108MP Pro Grade Camera | 6.79in Largest Display in Segment". The price is listed as ₹13,998. At the bottom of the page, there's a prominent "Add to Cart" button. The developer tools on the right are inspecting this "Add to Cart" button, showing its ID and class names.

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- **content that caught my attention:**

The case studies mentioned in the website expanded my horizon of knowledge in software testing and gave me insights into the real-world application of different kinds of testing.

Secondly, the section which describes testing solutions for every industry , talked about the importance of testing and types of testing and its application across globe, stressing on its necessity.

- Impressive service or case study: The case study on "Automated Regression Testing for a Leading E-commerce Platform" stood out due to its detailed approach and significant impact on the client's operational efficiency. The use of advanced automation tools and methodologies were a learning lesson to me.
- the blogs provided were in themselves are quite a treasure to explore for any budding tester, to get from community and professionals.

- **Approach to Problem-Solving in Software Testing:**

- My approach involves a systematic process of identifying, analyzing, and resolving issues. I start by understanding the problem context, gathering relevant data, and breaking down the problem into manageable parts. I then develop and implement a solution, continuously testing and refining it
- I stress on mainly writing extreme and innovative test cases,to test a program until its full capacity and push it beyond boundaries.

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- **Experience with Unexpected Challenges or Bugs:**
- During a SAAS project, I encountered a critical bug that lead to site crash. i implemented various testcases , covering each corner and logged the reports and fetched information about the bug's occurrence this lead me to root cause , which got fixed by proper libraries and path.
- **Strengths:** In my previous projects , I have developed this habit of going through literature review and running through various research papers. that gives me a proper idea on what other people have tried and how did they overcame obstacles , that becomes crucial in testing. my ability to effectively communicate with developers and pair programming helps the project succeed
- **Limitations:** I identified a need to improve my knowledge of performance testing. As, there is always a need for improvement in a code , so I guess testing perfection is a feat to achieve , but I want to be as close to it as I can.
- **Challenges in a Team Setting:**
- In a team project, we faced significant delays due to unclear responsibilities. Our communication was good, however, when roles and boundaries were blurry, it came out that 2-3 people were working on the same problem, which could have saved time.
- I took the initiative to organize regular meetings, establish clear roles, and improve our communication channels. I streamlined our workflow using Scrum event meetings and ensured the project's timely completion.

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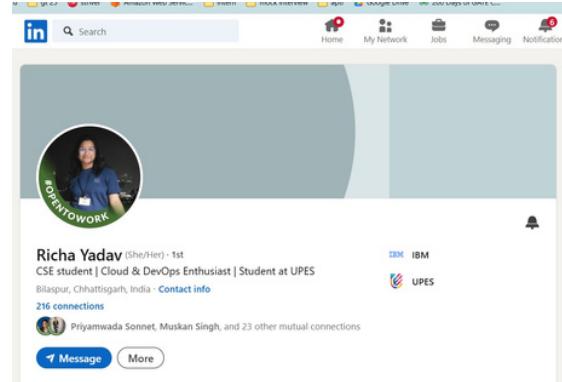
- **Career Path and Personal Goals:**

- Over the next 5 years, I envision myself advancing to a leadership role in software testing, Agile, and CloudOps sectors. I wish to become a professional Architect in the cloud and there I wish to implement my developing and testing skills in automation.
- My personal goals include to gain some off career insights on neuroscience and AI in digital world.
- Outside of my professional life, I aspire to learn about the society , anthropology and civil behaviour and wish to see myself working in one of these sector and blending it with tech.

- **Impact of AI on Software Testing:**

- AI advancements will significantly transform software testing by automating repetitive tasks, enhancing test coverage, and improving accuracy. AI-driven tools can analyze vast amounts of data, identify patterns, and predict potential issues, leading to more efficient and effective testing processes. This will allow testers to focus on more complex and creative aspects of testing, driving innovation in the field.
- for examples we have Testim , Applitools

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- **RESUME**



## **pixlricha - Overview**

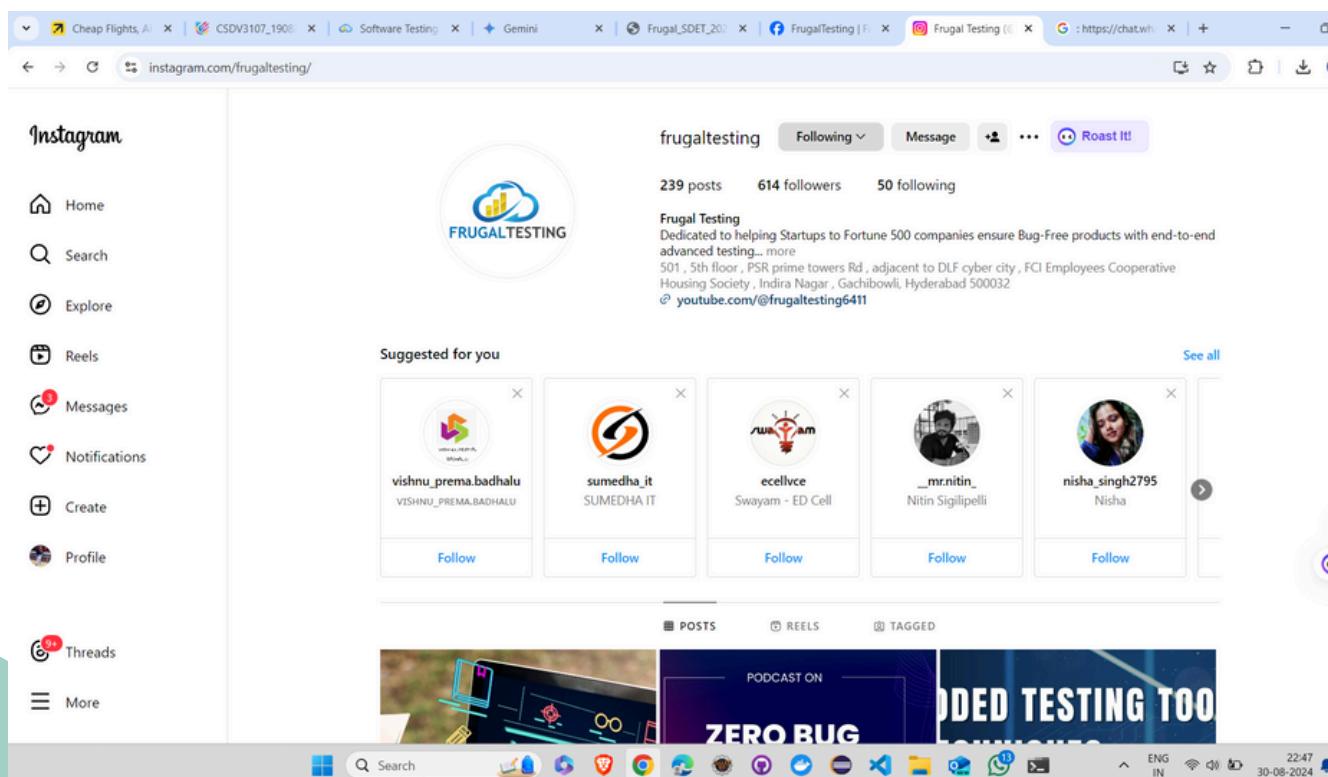
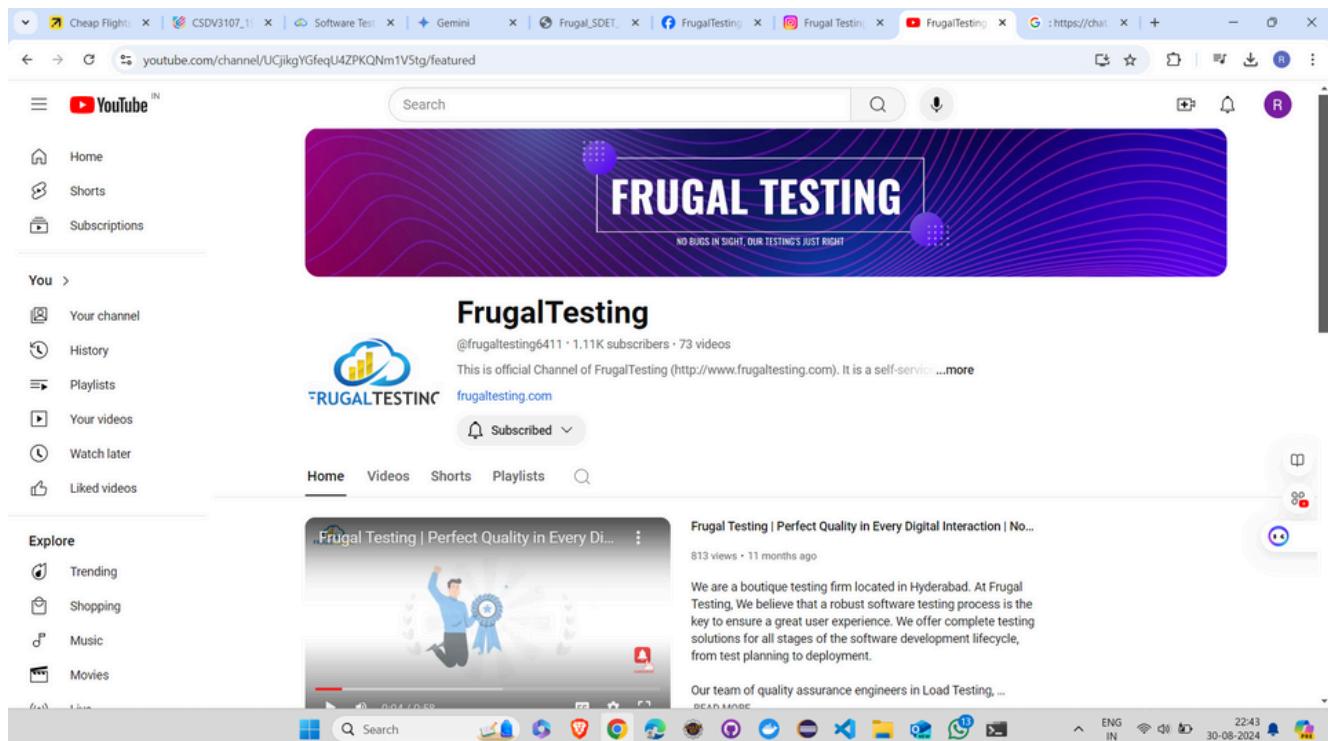
Hello there, my name is Richa Yadav and I'm currently pursuing bachelor's in computer science with a major in Cloud Computing from UPES. I've...

GitHub

- **GITHUB**

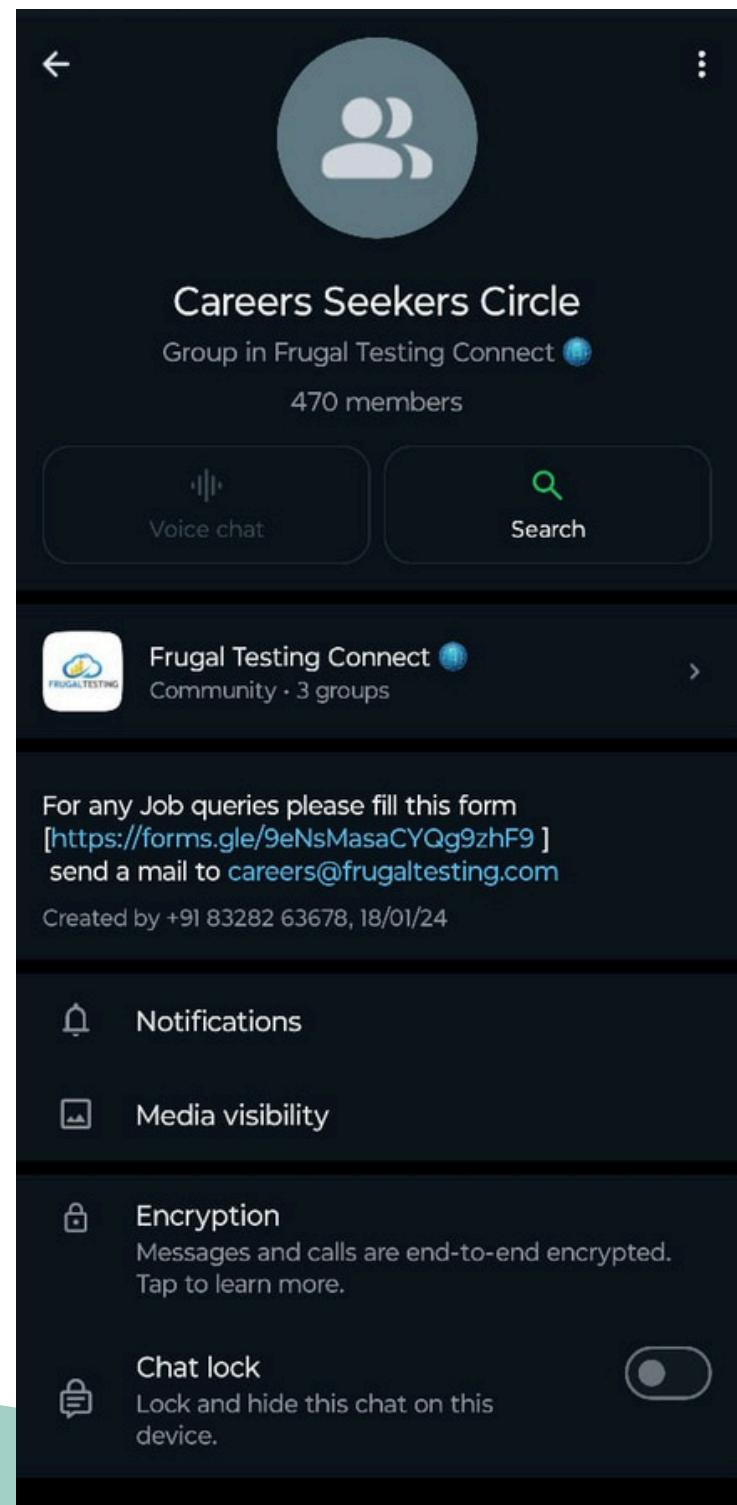
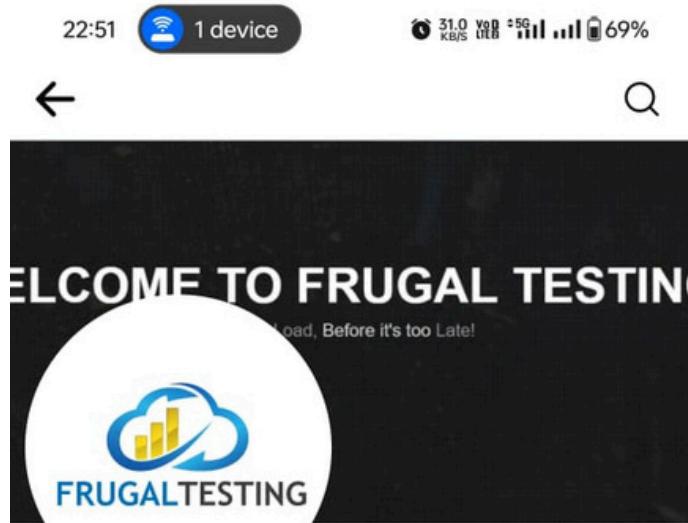
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- Follow social media



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- Follow social media



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- **Test Sign-Off Process:**

- Test sign-off is the formal process of approving the completion of testing activities. It signifies that the testing phase has met the predefined criteria and that the product is ready for release. This process involves reviewing test results, ensuring all critical issues are resolved, and obtaining approval from stakeholders.

- **Fuzz Testing:**

- Fuzz testing involves providing invalid, unexpected, or random data inputs to a software application to identify vulnerabilities and bugs. Unlike structured testing, which follows predefined test cases, fuzz testing aims to uncover issues that may not be anticipated by the developers, enhancing the robustness and security of the application. It has input, execution, monitoring, analysis

- **Six Sigma Process Improvement:**

- Six Sigma is a data-driven methodology aimed at improving processes by reducing defects and variability. It involves defining, measuring, analyzing, improving, and controlling processes to achieve high quality and efficiency. In software development, Six Sigma helps in identifying and eliminating inefficiencies, leading to more reliable and effective software products.

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- **Leveraging ChatGPT:**

- ChatGPT can be leveraged to automate and enhance various aspects of software testing. For instance, it can generate test cases based on user requirements, provide quick solutions to coding issues, and assist in analyzing test results. By utilizing ChatGPT, I was able to resolve a complex bug swiftly by obtaining detailed insights and suggestions, which significantly reduced the debugging time.

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- **Effective Approaches to Quality Assurance:**
  - The most effective approaches to quality assurance include comprehensive test planning, continuous integration and testing, and thorough documentation. Prioritizing these approaches involves understanding the project's requirements, setting clear quality goals, and implementing automated testing tools to ensure consistent and reliable results.
- **Developing a Test Automation Strategy:**
  - Key factors to consider when designing a test automation strategy include understanding the application architecture, identifying critical test cases, selecting appropriate tools, and ensuring maintainability. The strategy should focus on maximizing test coverage, reducing manual effort, and integrating seamlessly with the development process.
- **Experience with AI Tools:**
  - In my previous roles, I have utilized AI tools like ChatGPT , Binge copilot for generating test cases, automating repetitive tasks, and analyzing large datasets. These tools have enhanced my efficiency and accuracy, allowing me to focus on more complex testing activities and improving overall test coverage.
- **Utilizing ChatGPT for Test Case Generation:**
  - by analyzing user requirements and generating relevant test scenarios. It can also improve bug reporting by providing detailed descriptions and potential solutions, and facilitate the analysis of test results by identifying patterns and anomalies.this for me reduced a lot of time , which Ifurther used in analyzing the code and brainstorming

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- Article on “Impact of Machine Learning on Software Development”:

What is software development?

- it is the lifecycle of a software product, right from- Requirements gathering and analysis
- Design and architecture
- Implementation
- Testing and quality assurance
- Deployment and maintenance

What is machine learning?

Machine learning (ML) is a subset of artificial intelligence (AI) that involves the development of algorithms that enable computers to perform tasks without explicit instructions. now lend of machine learning and software development can have significant impact in the industry in terms of both profit and quality but also poses some critical questions to answers.

how can we integrate them together? there are various tools in market to integrate :

- AutoML and low-code/no-code platforms
- Neural architecture search
- ML model versioning and deployment (MLOps)

now what are the impacts ML can have on quality of code:

- Code Generation and Optimization: ML models can assist in generating code snippets or entire components, reducing development time and effort.
- Automated Testing: Machine learning can be used to predict potential bugs, generate test cases, and automate testing processes, leading to more reliable software.
- ML models can predict system failures or performance degradation, allowing for automated alerts and proactive measures in CI/CD pipelines.

While providing positives, it has biases and lack of proper skillset facing as a major hurdle in coming years

# FRUGAL TESTING

- Article on “Impact of Machine Learning on Software Development”:

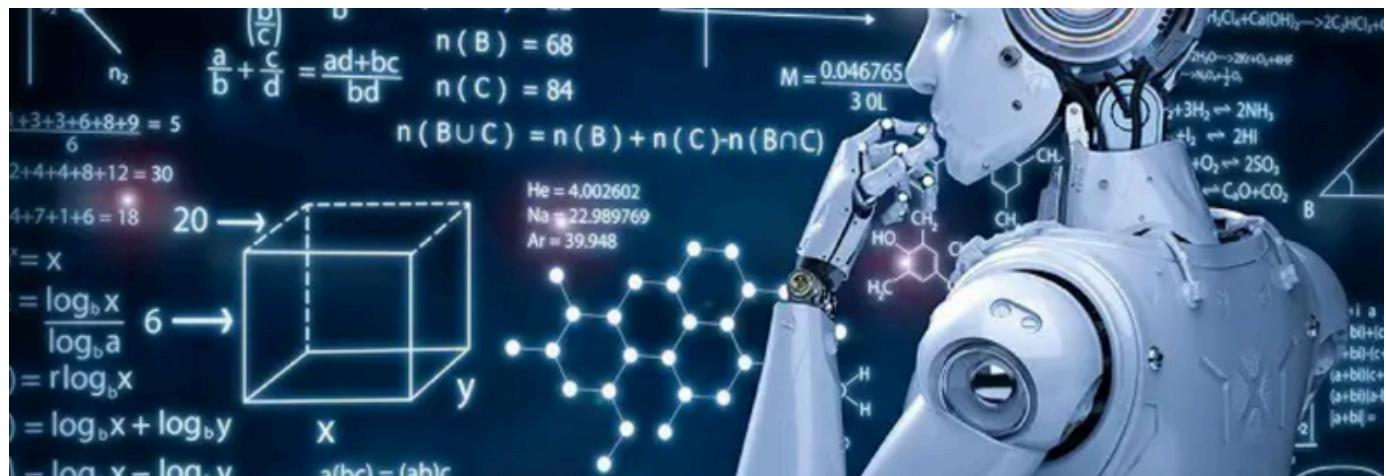
while machine learning is revolutionizing software development by automating processes, enhancing decision-making, improving user experiences, and enabling the creation of innovative solutions. However, it also introduces new challenges, such as increased complexity and the need for ongoing model management.

i personally felt ease in doing the hectic manual task with help ML tools , be it for testing , generating test cases or optimizing a code and increasing its efficiency.  
it reduces manual error.

however , learning to implement ML into any sector becomes a tech-savvy task for team to collaborate on or to understand.

I am excited about the opportunity that ML opens in software development in terms of Artificial General Intelligence (AGI) in software development and Edge AI.

Hoping for the best!



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**A: If you have a free weekend with no obligations, what activity would you most likely choose?**

ii.) Catching up on rest and relaxation, possibly with a good book or movie.(AI and neuroscience)

**B: When faced with a significant decision, how do you typically arrive at your choice?**

ii.) I rely on my instincts and gut feeling to guide me.

**C: Your current project at work is suddenly changed, and you're now responsible for an area outside your expertise. How do you approach this challenge?**

ii.) I'd rely on my ability to adapt quickly and use my foundational skills to navigate this new challenge.

**D: You have an important work deadline and a personal commitment clashing on the same day. How do you handle this situation?**

ii.) I prioritize based on the urgency and importance of each and make a decision accordingly.