



KULIAH TAMU : TELKOM UNIVERSITY



TESTING FUNDAMENTAL

PREPARED BY ALIFIA

Class Rules

1. There are no stupid questions!! More questions, the merrier
2. You can interrupt me at anytime to ask questions or clarify or state your opinion

Alifia

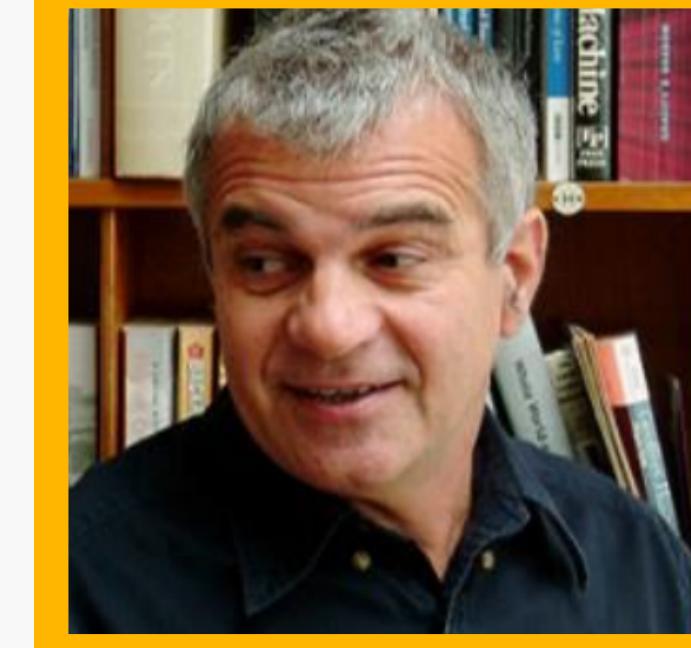
- **Software Testing Consultant based in Yogyakarta.
Active in ISQA Yogyakarta Chapter as volunteer**
- **Alif Test Consulting provide testing as service : R&D, Consulting, Outsourcing and Training.**



Apa yang teman-teman tahu mengenai software testing?

“Contemporary computers **cannot do just the same thing** as humans because they do not fit into society as humans do, so the surrounding society must compensate for the way the computer fails to reproduce what it replaces. This means that a complex judgment is needed to test whether software fits well enough for the surrounding humans to happily ‘repair’ the differences between humans and machines. This is much more than a matter of deciding whether the cogs spin right.”

Harry Collins
Eurostar 2013





WHAT IS SOFTWARE TESTING

Evaluating a product by learning about it through
experiencing, exploring and experimenting

Based on Rapid Software Testing Syllabus

Complexity of Testing



Taken from
Rapid Software Testing
Syllabus



DAILY TESTING PROBLEM IN OFFICE

- Unclear specification and requirement
- Identify risk/issues/bugs
- Communicate the issues
- Different perspective on quality

MULTI ROLE AS SOFTWARE TESTER

Problem Seeker

Kalau saya pakai earphone bluetooth, bisa ga ya.

Investigator

Berkutat mencari root cause bug sampai 1 bulan.

Craftsman

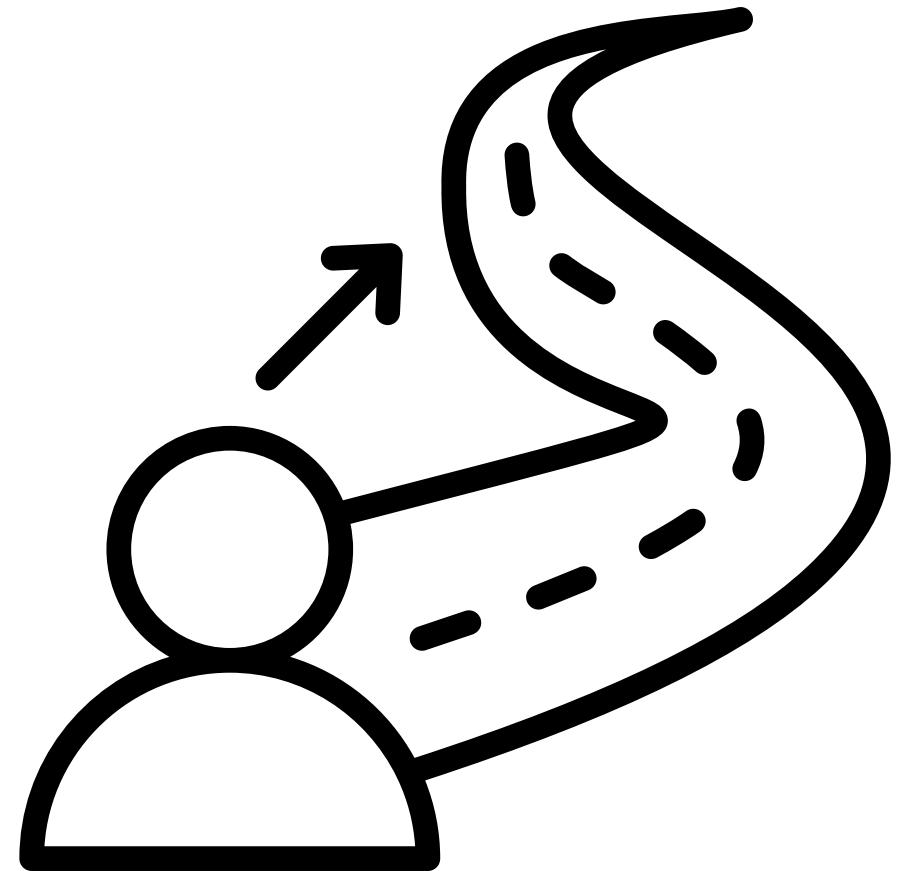
Pakai inspect element untuk kemudian buat script performance test

Seer

Merasa orang yang berumur akan sulit menggunakan appnya

Translator

Menterjemahkan arti 3% login error kepada tim Customer Operation



**HOW DO SOFTWARE
TESTER NAVIGATE
THEMSELVES IN THIS
COMPLEX ENVIRONMENT**

HEURISTIC

Heuristic ~ Model, Rule of Thumb, Social Norm, Checklist, Mnemonic etc

Excellent testing requires skill, but heuristics give structure to that skill. Heuristics help us access our skills under pressure.

Heuristic != Best Practice

Reference : <https://www.ministryoftesting.com/articles/test-heuristics-cheat-sheet>

- **Acceptability:** The product is inconsistent with how good it can reasonably be (not just good; good enough).
- **Familiarity:** The system is consistent with the pattern of any familiar problem.
- **Explainability:** The system is inconsistent with our ability to describe it clearly.
- **World:** The system is inconsistent with things or patterns that we recognize in the world.
- **History:** The present version of the system is inconsistent with past versions of it.
- **Image:** The system is inconsistent with an image that the organization wants to project.
- **Comparable Products:** The system is inconsistent with aspects of comparable systems, algorithms, etc.
- **Claims:** The system is inconsistent with what important people say it's supposed to be.
- **Users' Desires:** The system is inconsistent with what users want.



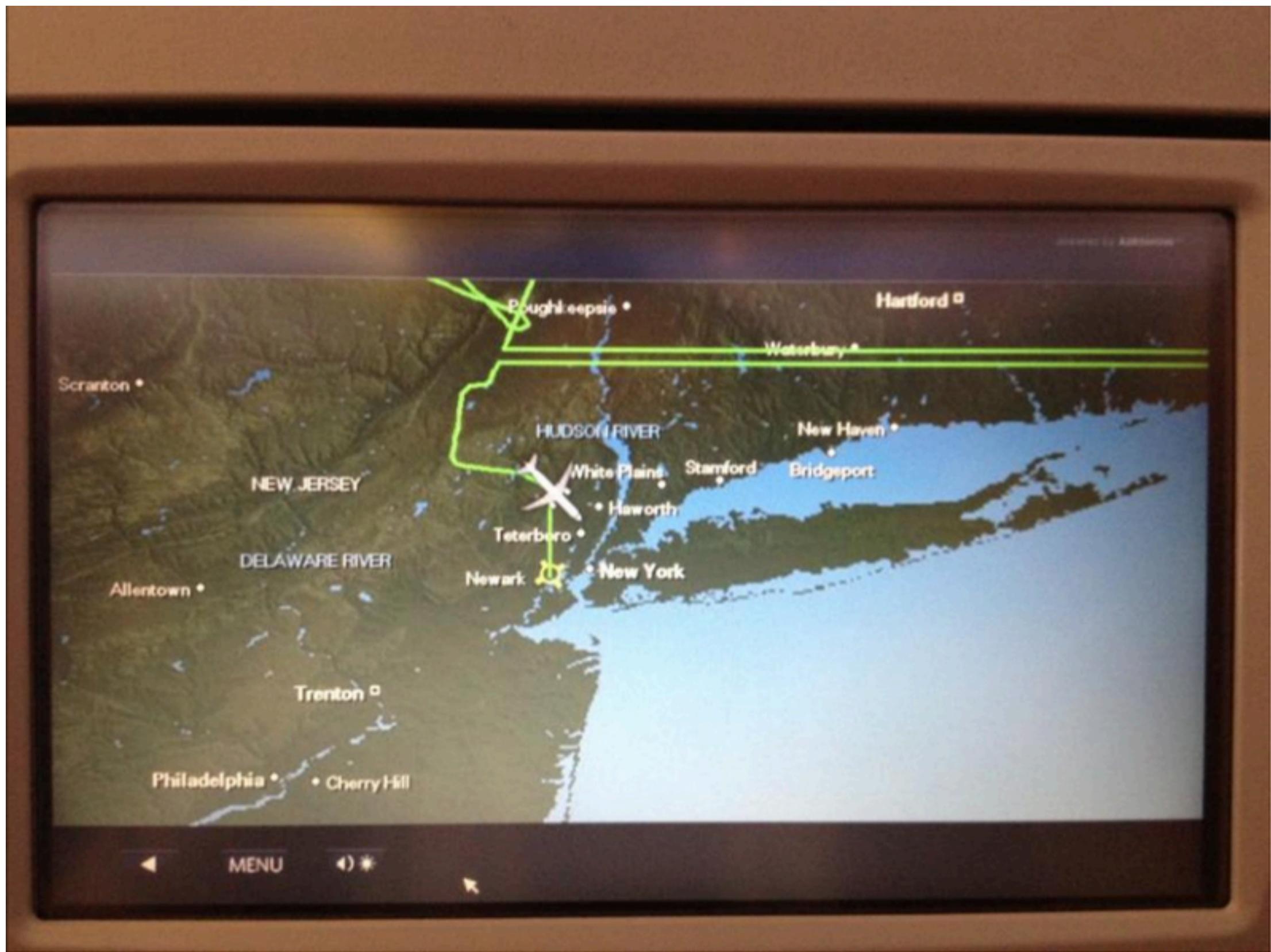
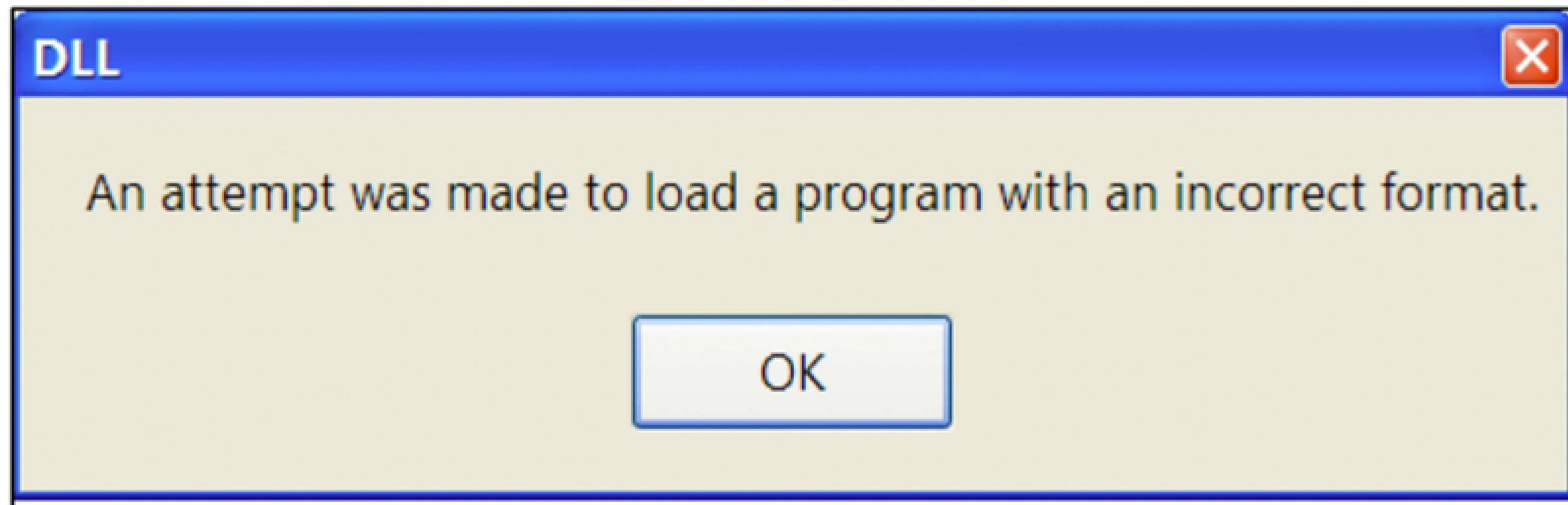


IMAGE 1

**IS THIS AN ISSUE?
IF YES, WHY?**



**IS THIS AN ISSUE?
IF YES, WHY?**

IMAGE 2



About DevFactory

DevFactory Offerings

Customer Success

Partner v

> What is a Software Factory?

What is a Software Factory?

Please `<?php print l('contact us', 'node/4'); ?>` for a detailed white paper on software factory

Software Factory is a radical and new way to develop and maintain enterprise applications. Instead of traditional materials based approaches, the software factory relies on extensive standardization and automation to dramatically improve results.

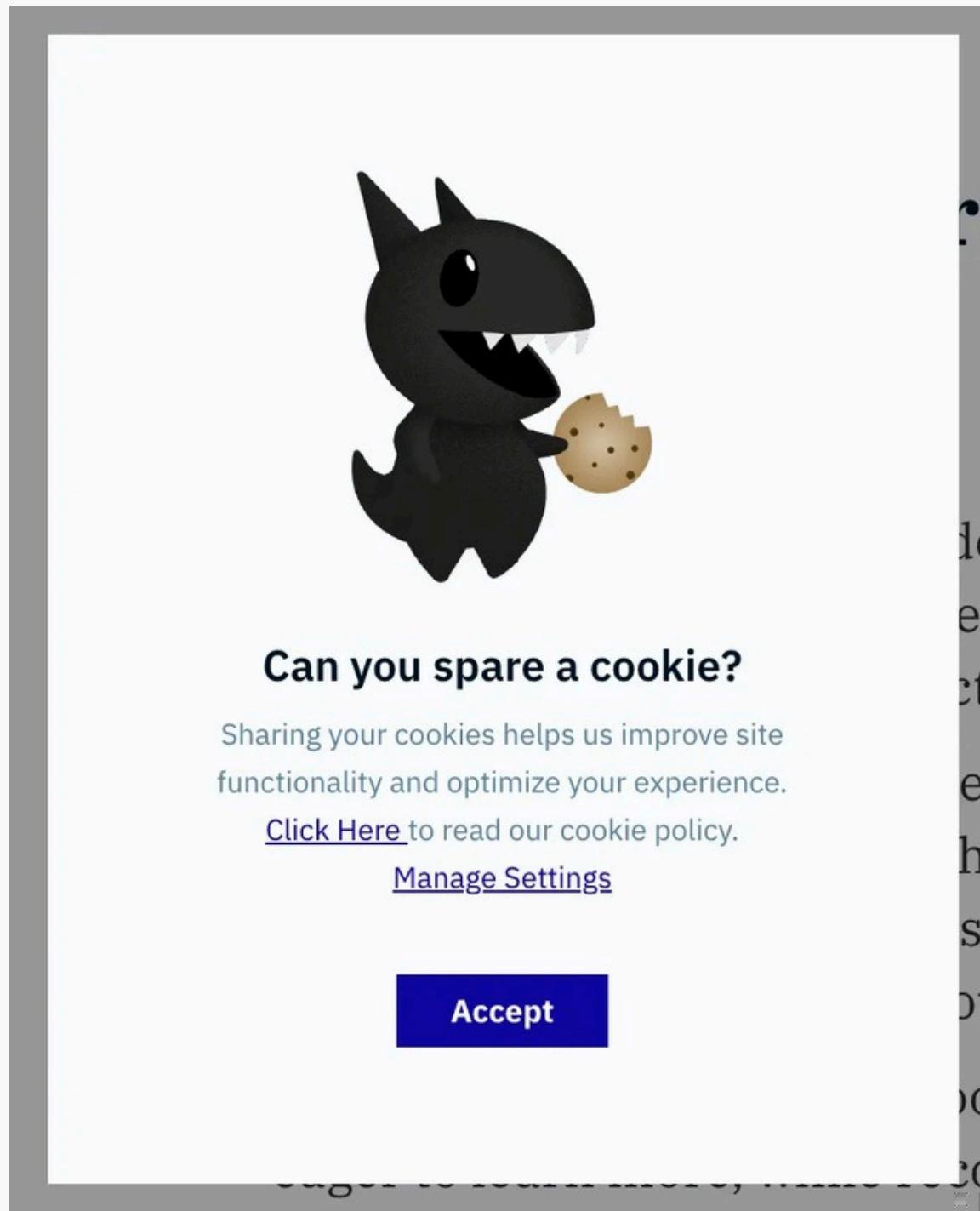
The fundamental premise behind the software factory is that any enterprise application maintenance/development can be reduced to `php print l('four standard service types','node/3');`. Enterprises can now complete all their product development using a specified number of each of these services.

This level of standardization lends itself to automation – another key tenet of the factory. Development, testing, and integration processes are completely automated using standardized tools thereby eliminating manual processes. This allows each service type to execute at very low costs and with high success rates.

IS THIS AN ISSUE?
IF YES, WHY?

IMAGE 3

IS THIS AN ISSUE? IF YES, WHY?





TEST THIS

<https://altom.gitlab.io/altwalker/snipcart-jekyll-ecommerce-demo/>

Create one paragraph about

1. How you test
2. What did you find
3. Why it matters

Remember these :
experience , explore and experimenting

NO RIGHT AND WRONG ANSWER

WHAT'S NEXT IN TESTING

CNN EVENING NEWS
Behind the controversial AI tech used to inspect rental vehicles for damages



As millions of Americans get ready to hit the road for Labor Day weekend, some rental car companies are deploying artificial intelligence scanners to look for damage – and it may lead to more consumers getting dinged.

The new technology that spots damage to rental vehicles has sparked concerns among lawmakers after some customers complained about surprise repair costs and added fees.

Adam Foley and his wife said they rented a car from [Hertz](#) during a family trip to Atlanta this summer. When they returned home to San Antonio, Foley said he started getting automated messages from the rental company. The messages claimed damages were found on the rental vehicle, saying he owed \$80 for two small dents and another \$190 for a processing fee.

business / tech
'There are no guardrails.' This mom believes an AI chatbot is responsible for her son's suicide



By Clare Duffy, CNN
6 min read · Updated 2:17 PM EDT, Wed October 30, 2024

'My child is gone.' Why a mom blames AI for her son's suicide

04:23

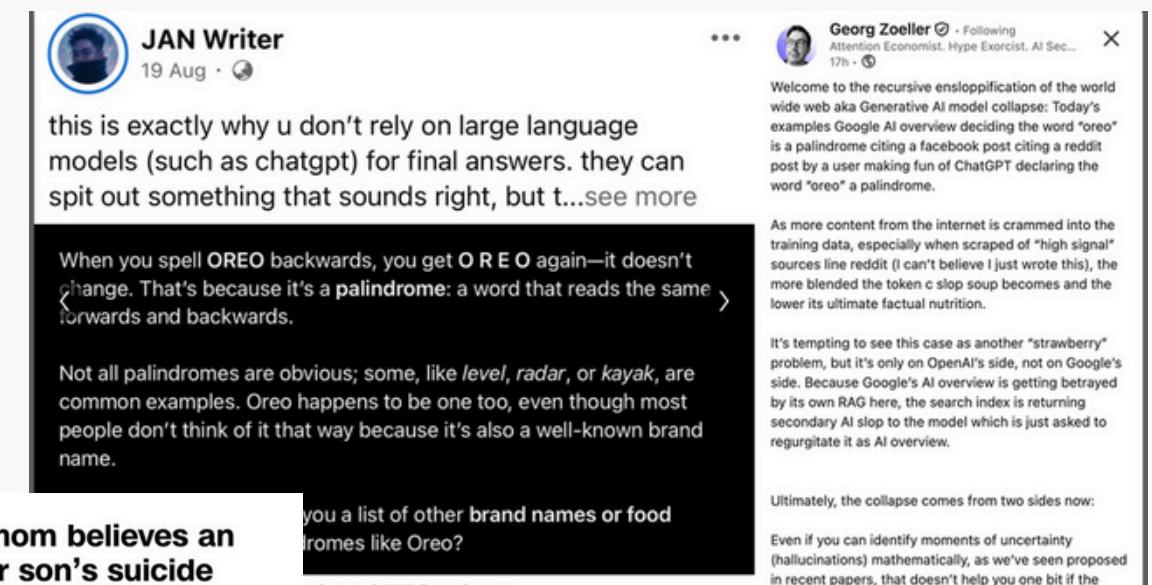
New York (CNN) — Editor's Note: This story contains discussion of suicide. Help is available if you or someone you know is struggling with suicidal thoughts or mental health matters.

In the US: Call or text 988, the Suicide & Crisis Lifeline.

Globally: The International Association for Suicide Prevention and Befrienders Worldwide have contact information for crisis centers around the world.

"There is a platform out there that you might not have heard about, but you need to know about it because, in my opinion, we are behind the eight ball here. A child is gone. My child is gone."

AI is here to stay and many company will build product with AI as one of its component



JAN Writer
19 Aug ·

this is exactly why u don't rely on large language models (such as chatgpt) for final answers. they can spit out something that sounds right, but t...see more

When you spell OREO backwards, you get O R E O again—it doesn't change. That's because it's a palindrome: a word that reads the same forwards and backwards.

Not all palindromes are obvious; some, like *level*, *radar*, or *kayak*, are common examples. Oreo happens to be one too, even though most people don't think of it that way because it's also a well-known brand name.

Georg Zoeller · Following
Attention Economist, Hype Exorcist, AI Sec...
17h ·

Welcome to the recursive ensloppification of the world wide web aka Generative AI model collapse: Today's examples Google AI overview deciding the word "oreo" is a palindrome citing a facebook post citing a reddit post by a user making fun of ChatGPT declaring the word "oreo" a palindrome.

As more content from the internet is crammed into the training data, especially when scraped of "high signal" sources like reddit (I can't believe I just wrote this), the more blended the token soup becomes and the lower its ultimate factual nutrition.

It's tempting to see this case as another "strawberry" problem, but it's only on OpenAI's side, not on Google's side. Because Google's AI overview is getting betrayed by its own RAG here, the search index is returning secondary AI slop to the model which is just asked to regurgitate it as AI overview.

Ultimately, the collapse comes from two sides now: Even if you can identify moments of uncertainty (hallucinations) mathematically, as we've seen proposed in recent papers, that doesn't help you one bit if the

Futurism

OOPS, AI DID IT AGAIN | JUL 22, 9:09 AM EDT by FRANK LANDYMORE

AI-Powered Coding Assistant Deletes Company Database, Says Restoring It Is Impossible

"This was a catastrophic failure on my part," the AI said.

Artificial Intelligence / AI Coding / GenerativeAI / WebCoding



Image by Getty / Putum

NEWS • AI • TECH

Duolingo will replace contract workers with AI



by **Jay Peters**
Apr 29, 2025, 6:47 AM GMT+7

/ The company is going to be 'AI-first,' says its CEO.

Jay Peters is a news editor covering technology, gaming, and more. He joined The Verge in 2019 after nearly two years at Techmeme.

Duolingo will "gradually stop using contractors to do work that AI can handle," according to an all-hands email sent by cofounder and CEO

WHAT IF THE PRODUCT WE TEST HAS LLM COMPONENT?

LLM challenges

1. Non Deterministic : same input, different output
2. Hallucinate : make up fact
3. Explainability : we don't know how or why the model "decide" the output



SHIFTING PARADIGM

In standard industry practice we are taught to think and test rigidly. If it isn't the exact same with requirements then we conclude the test failed.

But we need to shift that paradigm. The degree of correctness isn't binary anymore, we need to be able to measure the spectrum of acceptable criteria. Thinking in a dichotomy variable perspective will not help us navigate the complexity of modern software applications.



Dichotomy Variable



Continuous Variable



please give definition about stratagem

A **stratagem** is a carefully planned trick, scheme, or maneuver used to achieve a goal — often by outsmarting an opponent.

Some key points about the term:

- **Military origin:** Traditionally, it referred to a clever plan or deception used in warfare to gain an advantage.
- **General use:** Today, it can describe any crafty plan or tactic in politics, business, games, or everyday life.
- **Connotation:** It often implies **cunning** or **cleverness**, sometimes even a bit of **deception**.

Example:

- In chess, sacrificing a piece to set up checkmate can be called a stratagem.
- In business, releasing a product early to preempt competitors could also be described as a stratagem.

please give definition about stratagem

A **stratagem** is a clever plan, trick, or maneuver designed to achieve a specific goal, often by outwitting an opponent.

- **Origin:** The word comes from the Greek *strategema*, meaning "the act of a general" or a military ruse.
- **Military sense:** Originally, it referred to a deceptive tactic used in warfare to gain an advantage.
- **Broader use:** Today, it can mean any crafty scheme, whether in business, politics, games, or daily life.
- **Nuance:** It usually carries a connotation of **cunning** or **trickery**, not just straightforward planning.

Example:

- In war: Pretending to retreat so the enemy falls into an ambush.
- In daily life: Pretending to forget something to avoid an unwanted task.

NON DETERMINISTIC

- Write a completely fictional story that includes only verifiable historical facts.

DocsGPT

+ New Chat

Manage Agents

Chats

selalubisa motto

Largest planet: Jupiter

Jane Austen wrote

France's capital, Paris.

Largest planet answer

Pride and Prejudice

France is Paris

Upgrade to Pro

Settings

Help

Answer

Tentu, berikut adalah langkah-langkah untuk membuka toko baru di [redacted]:

1. **Unduh Aplikasi** [redacted] jika Anda belum memiliki, unduh aplikasi [redacted] di ponsel Anda (tersedia di Google Play Store dan Apple App Store) atau kunjungi situs web [redacted]
2. **Daftar atau Masuk Akun** [redacted]:
 - Jika Anda sudah memiliki akun Tokopedia, cukup masuk.
 - Jika belum, daftar akun baru. Anda bisa menggunakan nomor telepon, email, atau akun Google/Facebook Anda.
3. **Akses Halaman Penjual:**
 - **Melalui Aplikasi:** Di halaman utama, cari ikon atau tulisan "Akun" (biasanya di pojok kanan bawah), lalu pilih "Buka Toko Gratis" atau "Mulai Jualan".
 - **Melalui Situs Web:** Setelah masuk, klik pada ikon profil Anda di pojok kanan atas, lalu pilih "Buka Toko Gratis" atau "Mulai Jualan".
4. **Isi Nama Toko dan Domain Toko:**

How can DocsGPT help you?

Sources Tools Attach

DocsGPT uses GenAI, please review critical information using sources.

HALUCINATE

refused because of conflicting instructions

telling fiction story with historical fact in some part

EXPLAINABILITY

TESTING EXAMPLE

Seed Fake Fact

Prepare test cases in the form of questions that contain factual statements whose truth we already know.

Input : "Apa yang membuat fitur langganan gratis ongkir dari Bukalapak di tahun 2008 sukses besar?"

Expected : Dari sini kita bertujuan mencari tahu apakah model akan mengarang fitur yang tidak pernah ada.

Ambiguity Injection

Find words or phrases that are ambiguous. For example, those with multiple meanings or commonly used names and ask the model to explain them without providing any extra context.

Input : "Jelaskan rute jalan Sudirman"

Expected : Model akan melakukan konfirmasi kembali karena di Indonesia banyak jalan yang menggunakan nama Sudirman.

TAKEAWAY

Rather than thinking software testing as mechanical process, it is more appropriate to think software testing as creative and analytical process which required a good mindset and strong critical thinking.

Thank you!



alifia@aliftestconsulting.com



aliftestconsulting.com



<https://www.linkedin.com/in/alifia-/>

