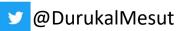


### Isn't Test Automation a Silver Bullet? The most common pitfalls

#### Mesut Durukal



in mesutdurukal

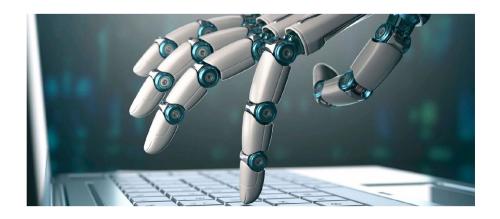








- •Saves time
- Improves coverage
- •Eliminate human effort
- Performs tasks that cannot be done by manual testers

















## **Product** Frequent Updates / Changes



How the customer explained it



How the project leader understood it



How the analyst designed

How the customer was

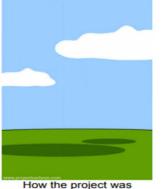
billed



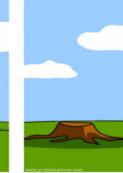
How the programmer wrote it



How the business consultant described it



What operations installed



How it was supported



What the customer really needed

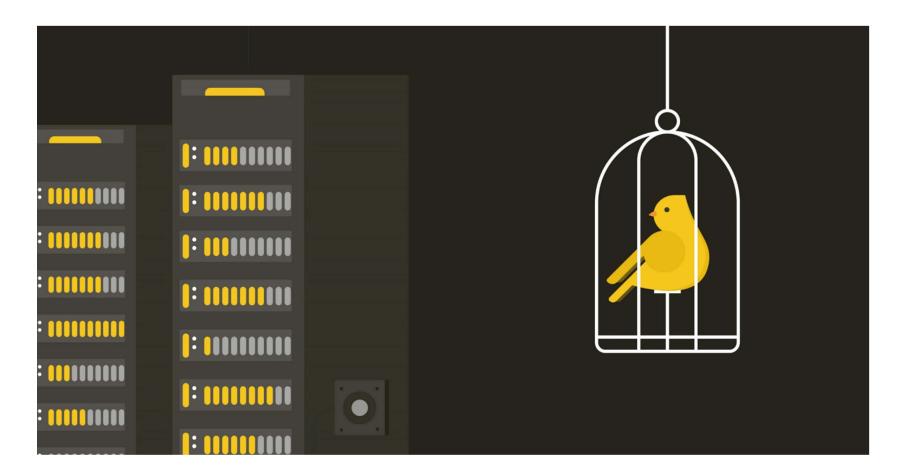


documented





## **Product** Unstable / Tricky Behaviors





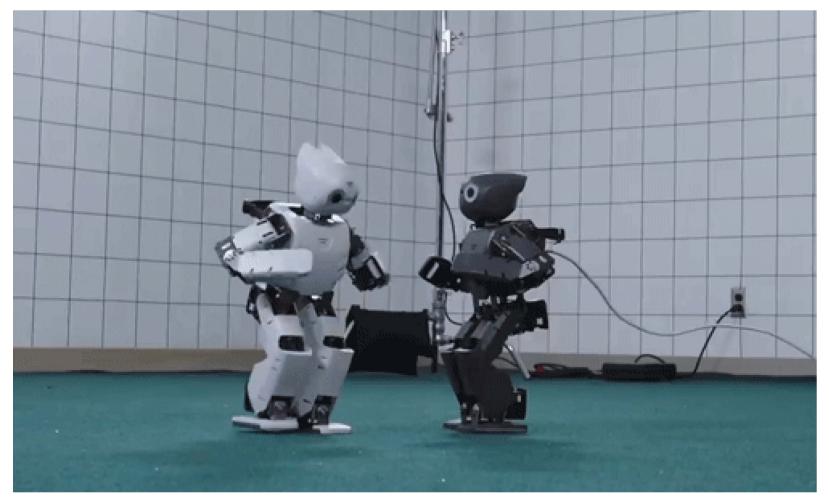




## **Product**



### Hardware







# Product



Testability

#### **TRAVELLING SALESMAN PROBLEM**



Greedy Algorithm



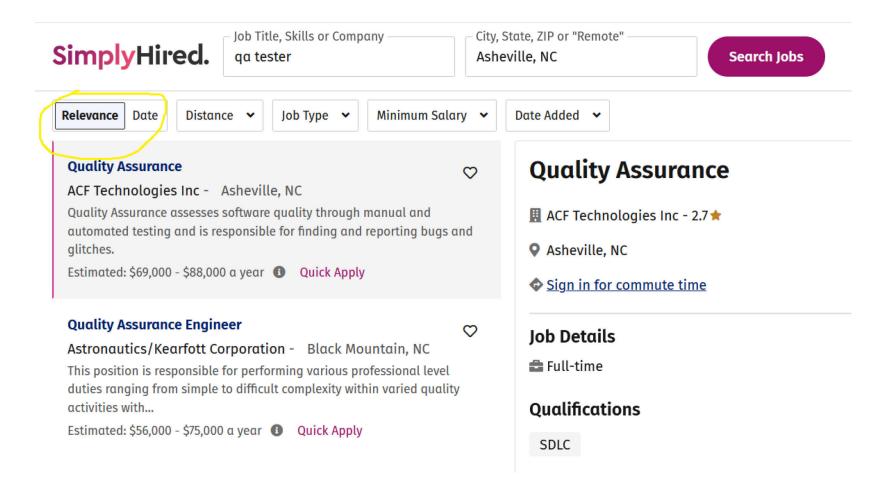


# Product

ETS



### **Testing AI / Perception**

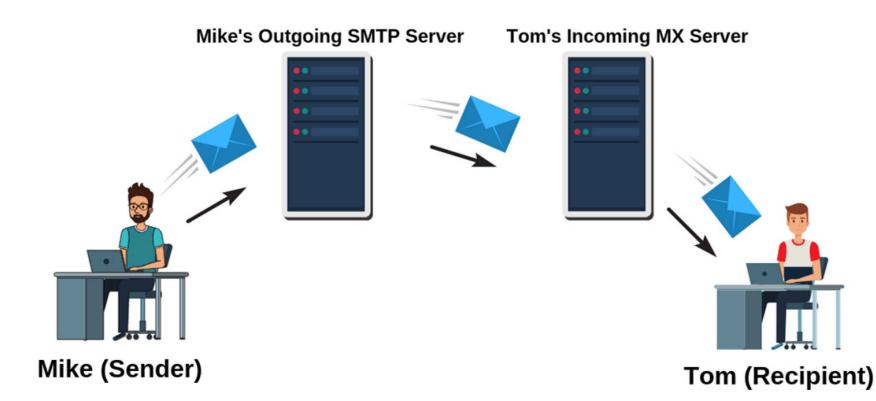








### Not always easy to build / set up



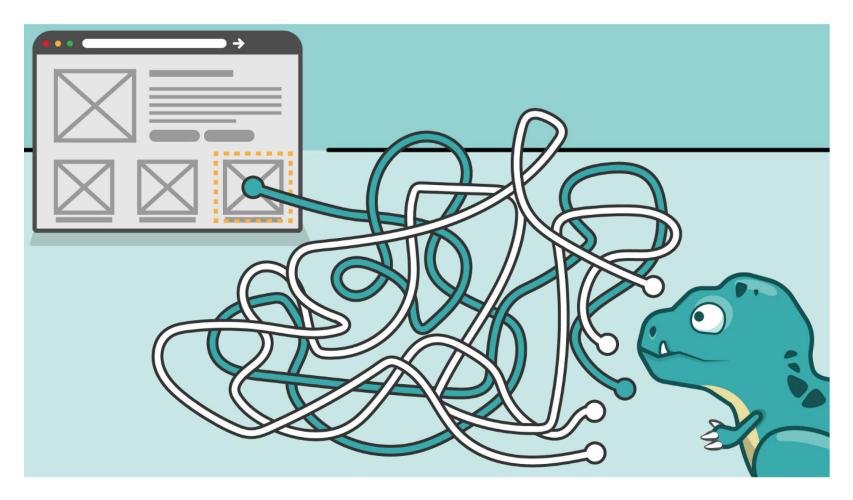






# Implementation

### Not always easy to figure out



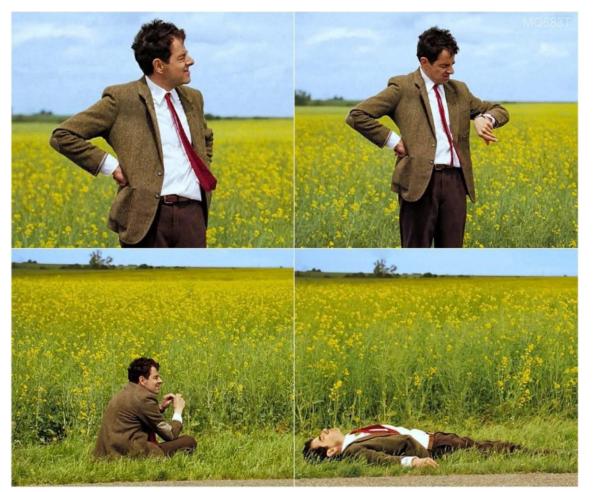




## Execution



### Long Running Tests



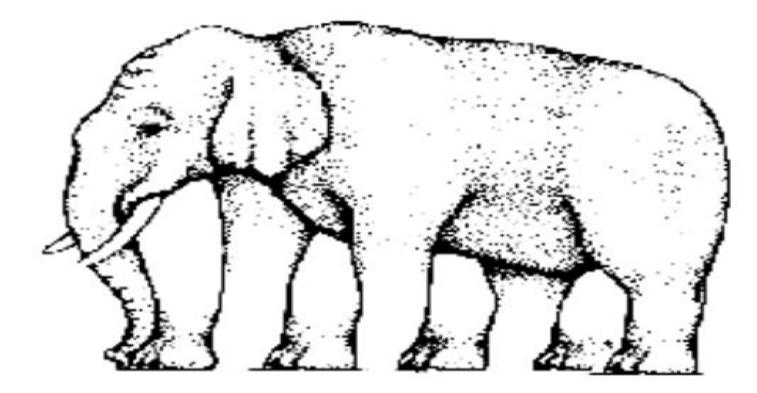




## Maintenance



### Illusion of Fixing



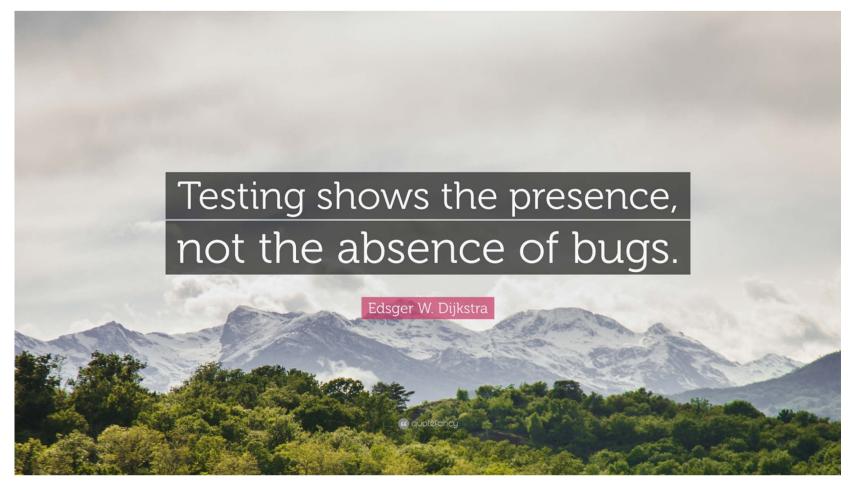
How many legs does this elephant have?





## Last, but not least

Coverage





Testing of Trustworthy Systems



9<sup>th</sup>

# Wrap Up



#### Common problems:

- Product
  - Coping with update/changes
  - Instabilities
  - Tricky Behaviors
  - Hardware in SUT
  - Testability
  - Al / Perception
- Setup / Implementation
- Maintenance
- Executions

## **Fundamental solutions:**

- Product
  - Collaboration with Product team
  - Collaboration with Dev team
  - Locators/Selectors improvement
  - Various verification approaches
  - Simulation and test harness
  - Non-functional testing
- Code Quality
- Monitoring
- Duration analysis

### ETSI



# Any further questions?

