

5 Ways to Improve Your Maven Projects Using Build Scans

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Who is this guy?



Java™
Champions





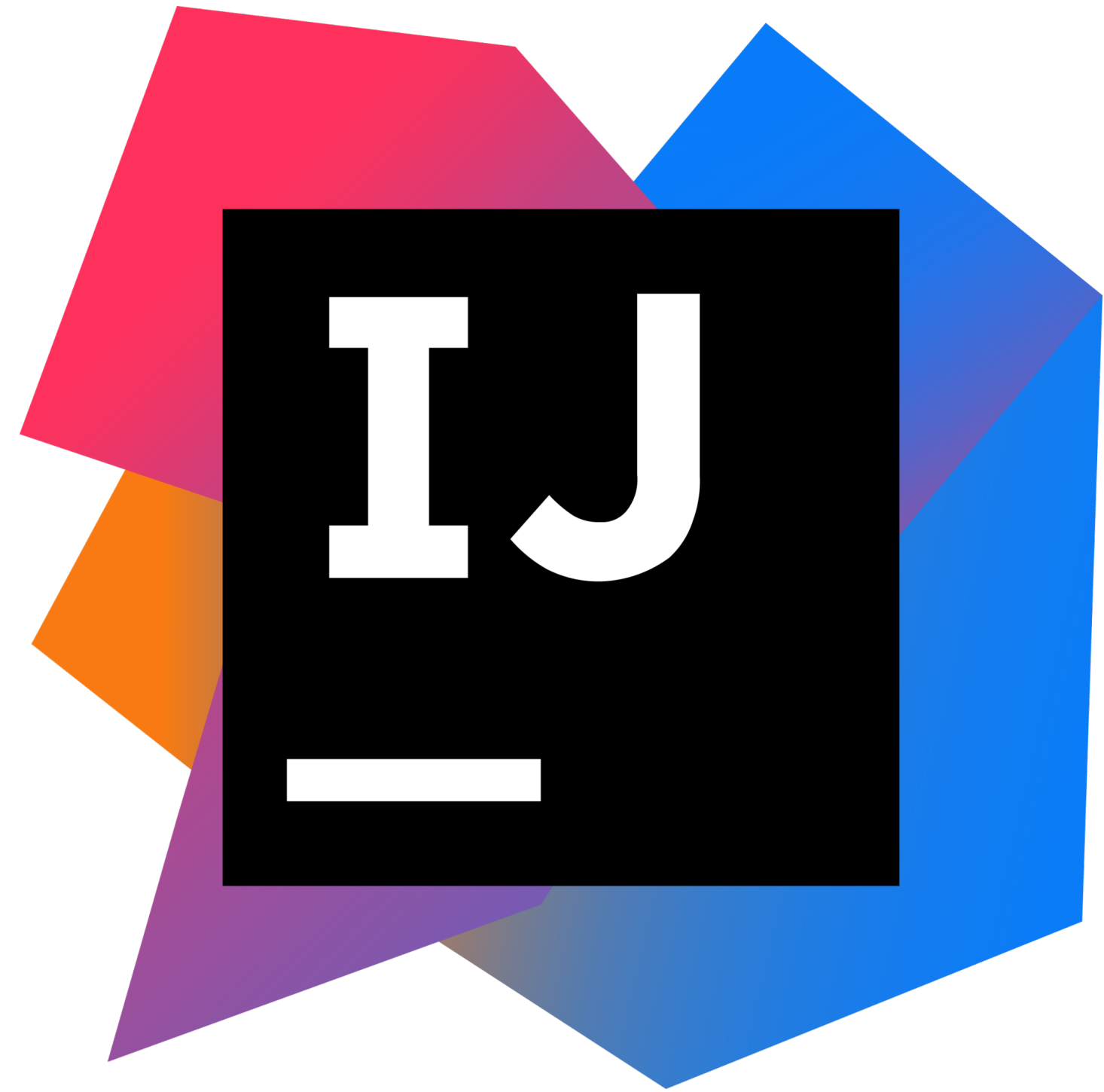
TABS



SPACES



VS

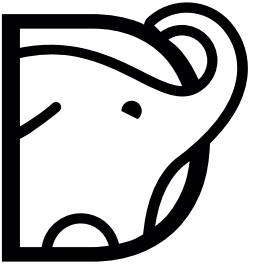




vs



Gradle

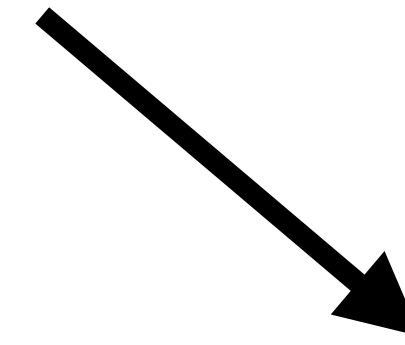
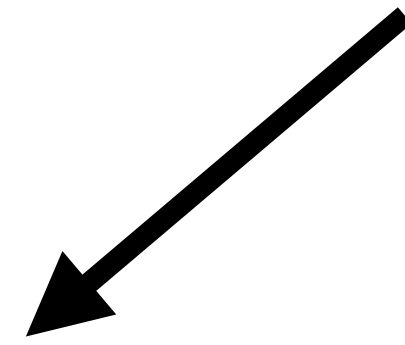
BUILD  TOOL

VS

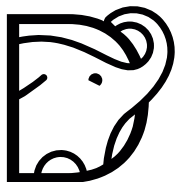
Maven  TM



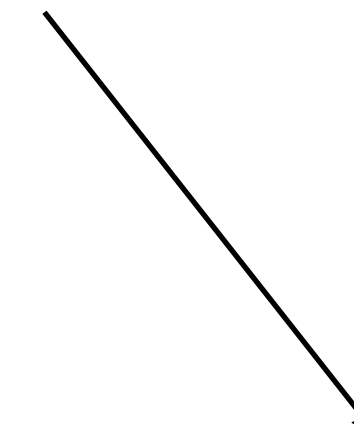
Gradle



Gradle

BUILD  TOOL

 DEVELOLOCITY



Developer
Productivity
Engineering

Gradle

BUILD  TOOL

*Maven*TM

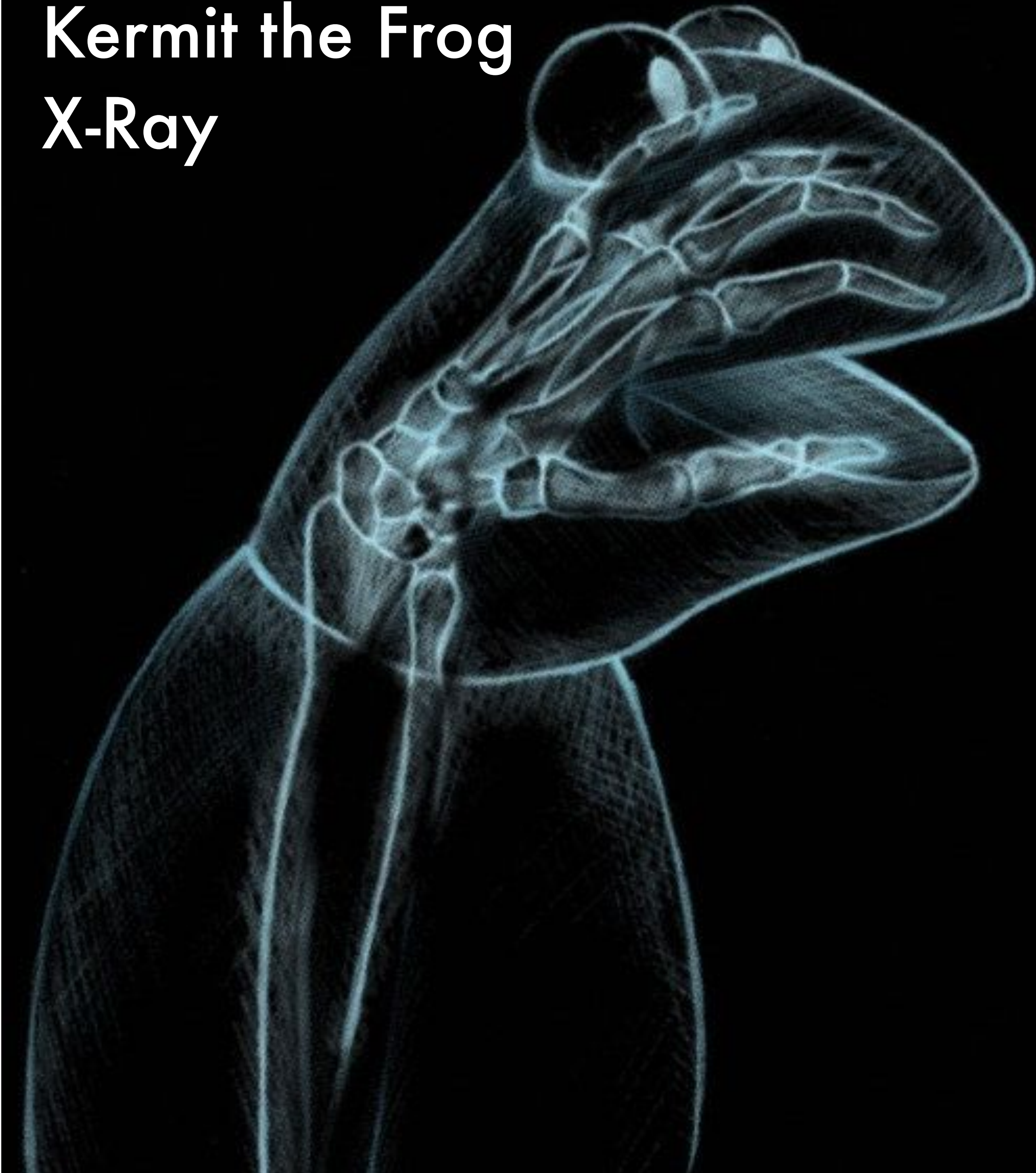
 Bazel

sbt

What is a Build Scan?

- X-ray of your build
- Contains info on CI and local builds
- Timing Info
- What was in your build
- Logs
- Test data
- etc.

Kermit the Frog X-Ray




```
# Add Extention
mvn com.gradle:develocity-maven-extension:1.21:init

# Run Build
mvn clean verify
```


1. Debugging Failed Builds

6 STAGES OF DEBUGGING

1. That can't happen.
2. That doesn't happen on my machine.
3. That shouldn't happen.
4. Why does that happen?
5. Oh, I see.
6. How did that ever work?

2. Share with Others



Build Scan

DEV ELOCITY Apache Arrow Java Root POM clean install Mar 25 2024 11:53:54 EDT Build Scans Sign in

435 goals executed in 24 projects in 5m 19.521s, with 51 avoided goals saving 6m 13.494s

Execution

| Goal execution | Phase | Started after |
|---|--------------------|---------------|
| clean:clean (default-clean) @ Arrow Bill of Materials | clean | 1.566s |
| clean:clean (default-clean) @ Arrow Maven Plugins | clean | 1.760s |
| remote-resources:process (process-resource-bundles) @ Arrow Bill of Materials | generate-resources | 1.844s |
| apache-rat:check (rat-checks) @ Arrow Maven Plugins | validate | 1.845s |
| site:attach-descriptor (attach-descriptor) @ Arrow Bill of Materials | package | 2.230s |
| checkstyle:check (validate) @ Arrow Maven Plugins FROM-CACHE | validate | 2.466s |
| install:install (default-install) @ Arrow Bill of Materials | install | 3.010s |
| git-commit-id:revision (for-jars) @ Arrow Maven Plugins | initialize | 3.347s |
| git-commit-id:revision (for-source-tarball) @ Arrow Maven Plugins | initialize | 9.398s |
| jar:test-jar (default) @ Arrow Maven Plugins | package | 10.967s |
| cyclonedx:makeBom (default) @ Arrow Maven Plugins | package | 11.059s |
| assembly:single (default) @ Arrow Maven Plugins | package | 11.780s |
| enforcer:enforce (validate_java_and_maven_version) @ Arrow Maven Plugins | verify | 12.188s |
| enforcer:enforce (avoid_bad_dependencies) @ Arrow Maven Plugins | verify | 12.269s |
| install:install (default-install) @ Arrow Maven Plugins | install | 12.279s |

3. View Dependency Info

```
$ mvn dependency:tree
```

```
...
```

```
junit-jupiter
```

```
+-- junit-jupiter-api
```

```
| +- opentest4j
```

```
| +- junit-platform-commons
```

```
| \- apiguardian-api
```

```
+-- junit-jupiter-params
```


4. Finding the Slow Parts of your Build

Slowest things in the world



Integration Tests



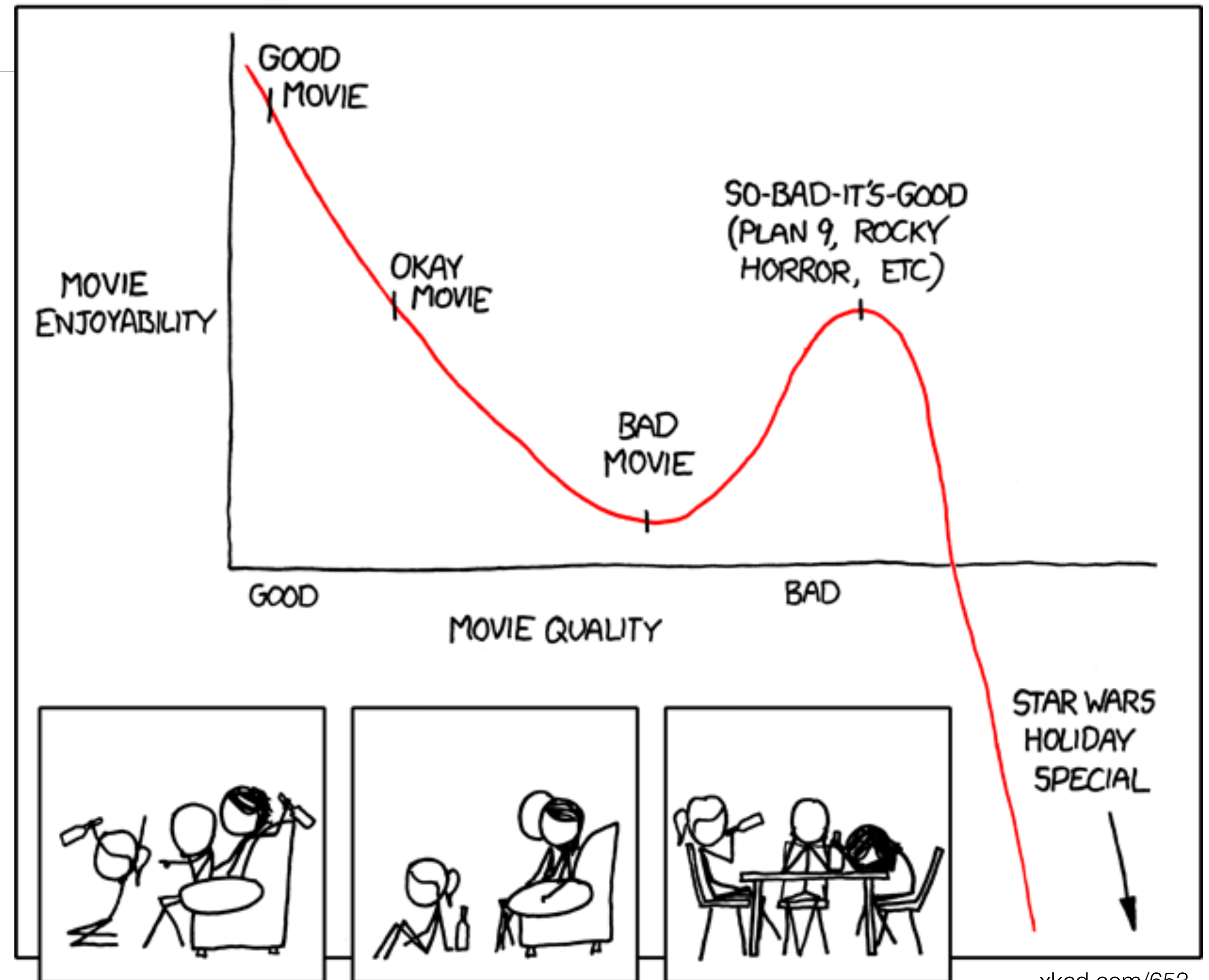
5. Build Cache Troubleshooting & Optimization



Bonus: Analytics / Trends

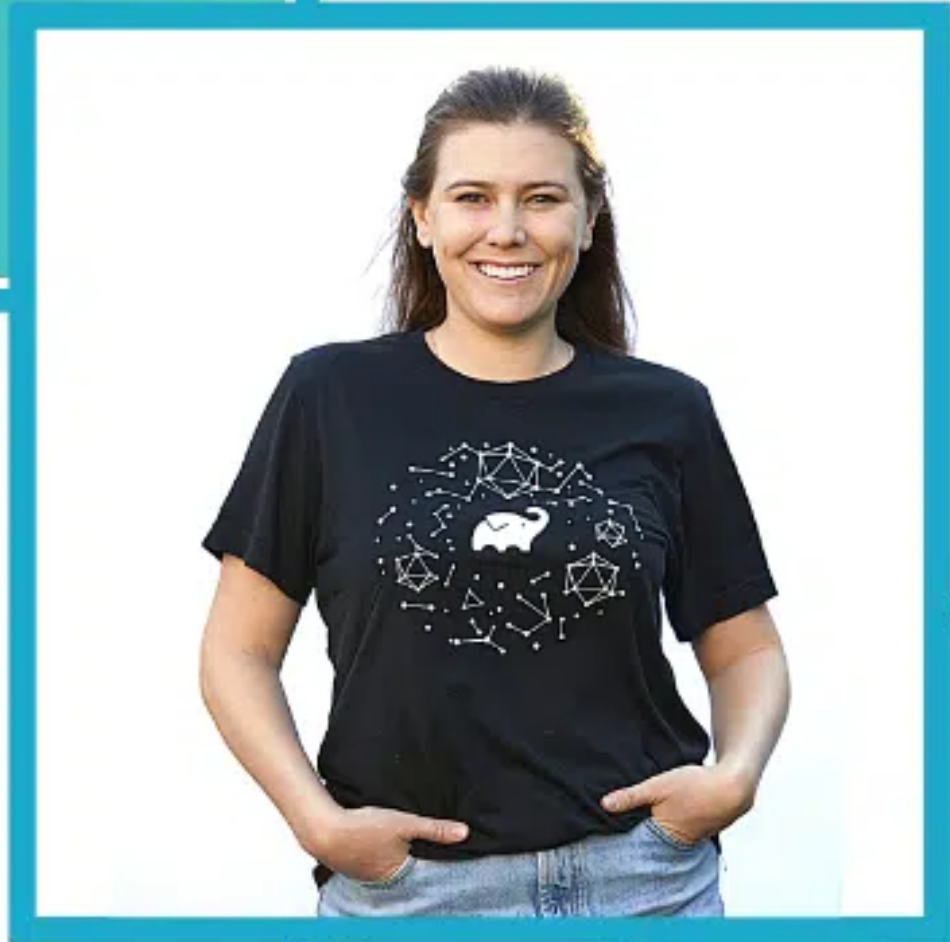
- Aggregated Performance Data
- Trend Dashboards
- Flaky Test Detection

PROTIP: EVEN AT "BAD MOVIE NIGHT,"
AVOID THE STAR WARS HOLIDAY SPECIAL.



xkcd.com/653

GRADLE SWAG GIVEAWAY



 **BrianDemers**

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