

# HOW ADVANCES IN THE JVM CAN SPEED UP CAMUNDA

## TIM ZÖLLER

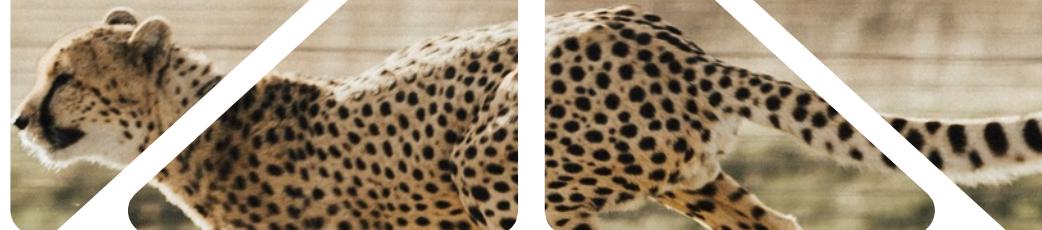


Photo by [Cara Fuller](#) on [Unsplash](#)

A close-up photograph of a hyena standing in a field of tall, golden-brown grass. The hyena is facing the camera, its mouth is slightly open, and it has a dark brown coat with light brown spots. The background is blurred, showing more of the grassy landscape.

**WHAT THIS IS NOT ABOUT**

# SLIDES WITH CHARTS

## IMPRESSIVE NUMBERS AND BAR CHARTS



**65%**

**MORE FAST**

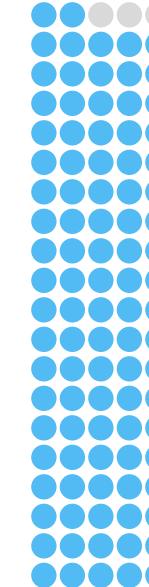
With the proposed solution,  
your application will be 65%  
more faster than before



**28%**

**LESS SLOW**

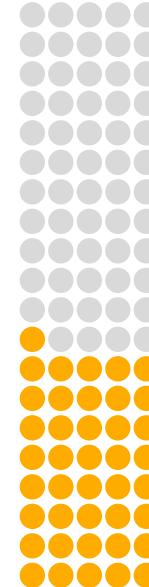
Also, if you use this technology,  
your application will be 28%  
less slow, too



**97%**

**BETTER**

In addition to being faster and  
less slow, it will also make your  
app 97% more awesome



**41%**

**RAM**

I don't know what you are doing  
with your application, but you  
will use up to 41% less RAM



**68%**

**IS A NUMBER**

We ran out of metrics, so we just  
but 68 here. 5 Bar Charts look  
better than 4



**WHO AM I?**

# TIM ZÖLLER

A.K.A. "JAVAHIPPIE"



**TIM ZÖLLER**

Senior IT Consultant



## ABOUT ME

- Developing Software since 2008
- Java, Clojure & BPMN
- ilum:e informatik ag

## SOCIAL



## MY USUAL TOPICS



JAVA

90%



BPMN

70%



CLOJURE

60%



COLLABORATION

40%



MUSIC & COFFEE

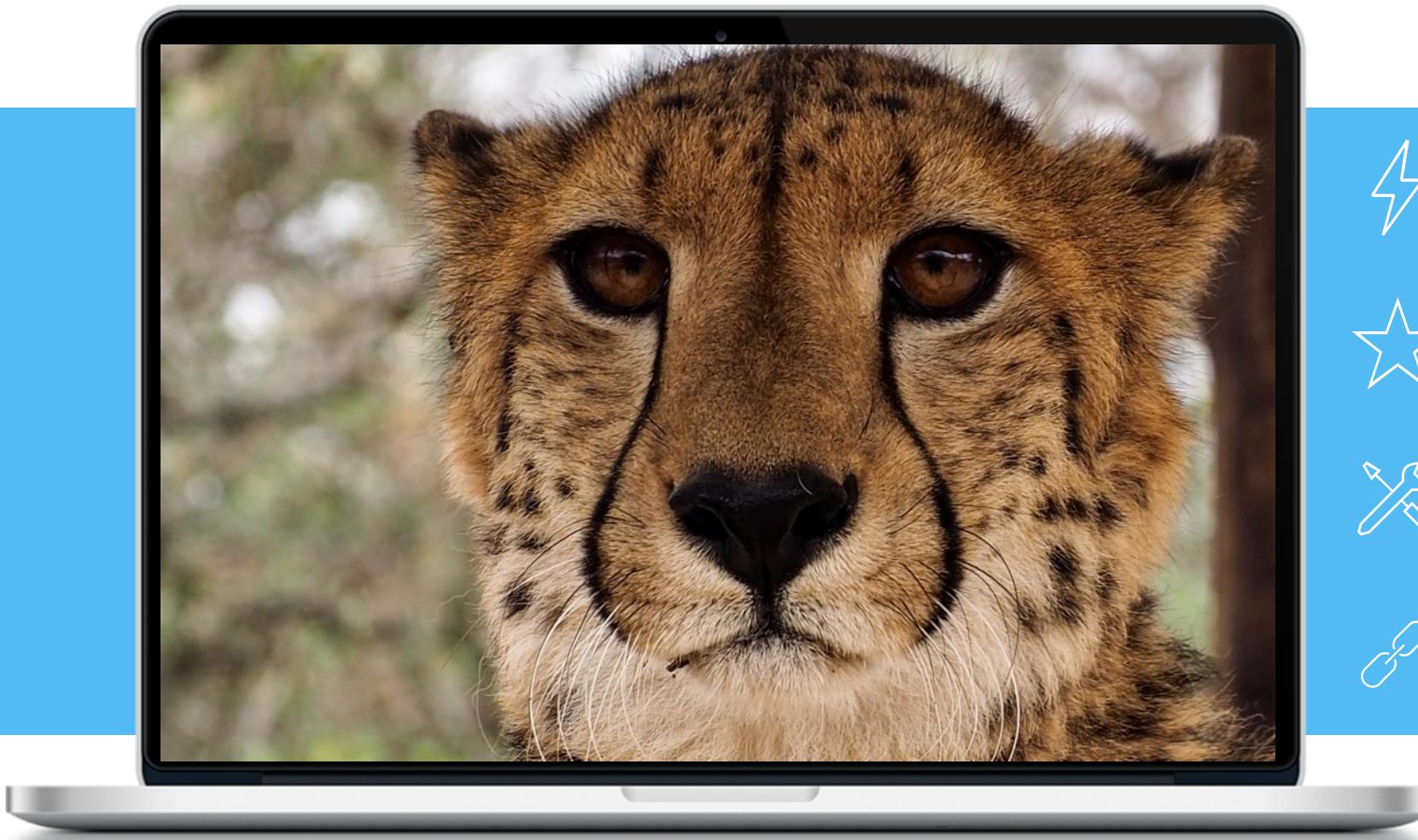
20%



WHAT WE WILL LOOK AT

# MY SCREEN

## APPLIED CONFIGURATIONS AND REAL TIME EFFECTS



A brief overview



Evaluation of results



Live demonstration of tooling



Links to resources in the end

# TECHNOLOGIES

WHO IS PROMISING THIS SHINY NEW WORLD?



## CLASS DATA SHARING

- Pre-Load Java Classes
- Java Standard Feature
- Since JDK 12
- Improvements in JDK 13

## GraalVM™

### GRAALVM

- High Performance Runtime
- AOT Features
- Community & EE Edition
- Polyglot
- Capable of Native Images



## MICRONAUT

### MICRONAUT

- Micro Framework
- AOT Features
- Open Source
- Capable of Native Images



## QUARKUS

### QUARKUS

- "Kubernetes Native Java Stack"
- AOT Features
- Open Source
- Maintained by RedHat
- Capable of Native Images

A cheetah is sitting in a field of tall, dry grass. The cheetah's body is angled towards the right, but its head is turned back over its shoulder, looking directly at the camera with a focused expression. Its coat is a light tan color with dark, irregular spots. The background is a dense expanse of similar tall grass.

**LET'S HAVE A LOOK!**

A close-up photograph of a cheetah's face and upper body. The cheetah has distinctive black spots on its light brown and tan fur. Its eyes are a deep, expressive brown. The background is a soft-focus, dry, brown landscape.

**ARE WE HAPPY WITH THAT?**

# SOME BENEFITS

## ARE THEY WORTH IT?



### STARTUP TIME

- Not relevant for most people
- Fast scalable Microservices?
- "Serverless" Service workers?

### APPLICATION SPEED

- No JIT optimizations for native image

### MEMORY FOOTPRINT

- Interesting for cheaper cloud hosting
- But most expensive: Database

### FLEXIBILITY

- Some limits for technology choices

A photograph of two cheetahs in a grassy savanna. One cheetah is in the foreground, facing away from the camera, while the other is behind it, facing towards the camera. They are both feeding on a large, dark-colored animal carcass. The background consists of tall, dry grass under a clear sky.

**THANK YOU!**

Questions?

