

Serverless Revolution

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**How Women Shape Technology Today (part 2)
10/19/2016**

My life in one slide...



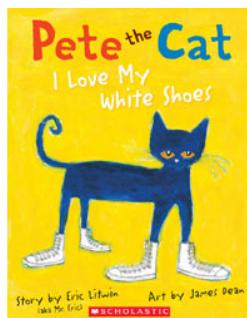
Originally from Romania



Masters in distributed systems
PhD in computer architecture
Intern at Intel Labs and IBM Research

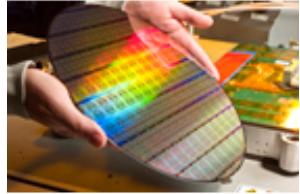
Infrastructure for cloud computing
Data for social good

Married to a computer science researcher
~ 2 year old son

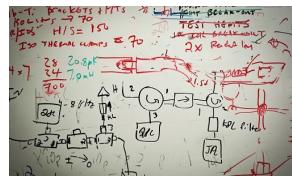


IBM T.J. Watson Research Center

One researcher - many domains



One title - many projects



basic research



product impact



open source

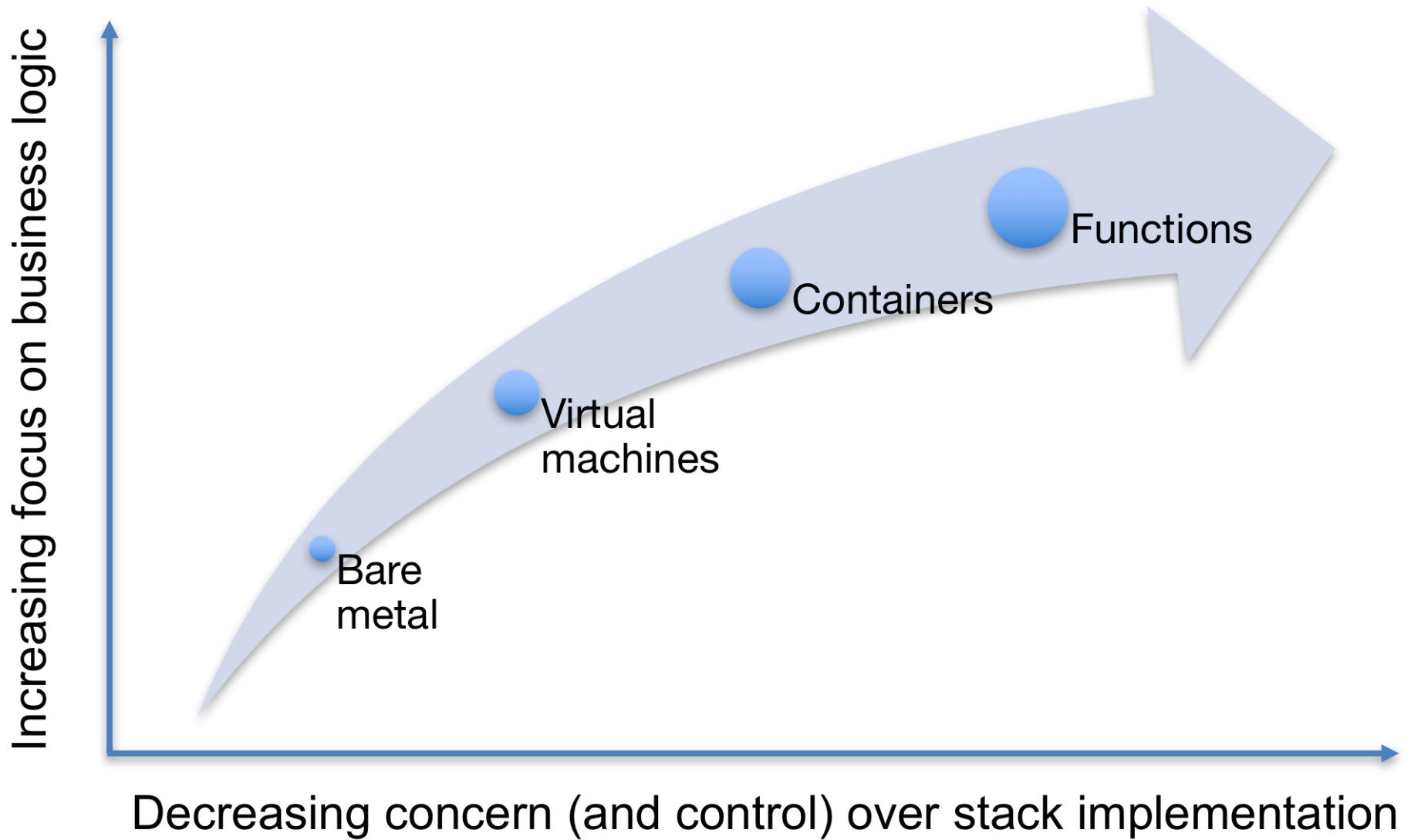


science4good

One person - many roles



Cloud computing from 10K feet



Serverless aka Function-as-a-Service (FaaS)

Code snippet as unit of deployment

BYOC - Bring Your Own Code - any (supported) language

Event driven

Function execution triggered by events

Pay-as-you-go cost model

No more “idle” cost

Automatic scaling

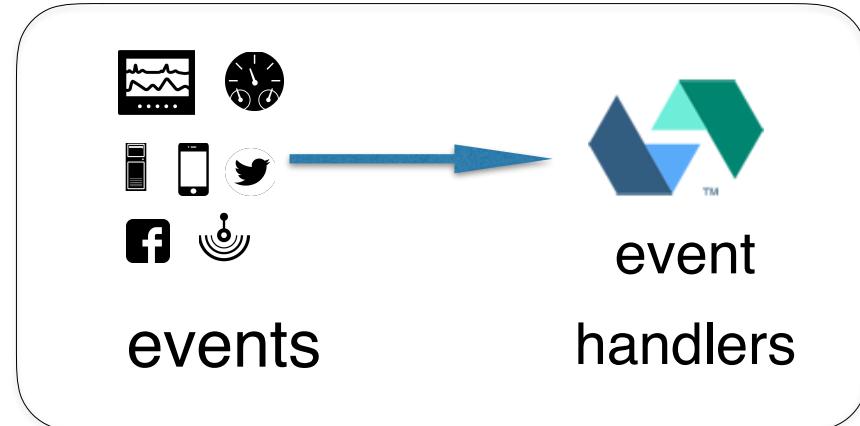
Resources allocated on-demand

Spoiler alert

Tons of servers behind the scene

In other words...

What is FaaS?



a cloud-native platform
for
short-running, stateless computation
and
event-driven applications
which
scales up and down automatically
and
charges at millisecond granularity

What is Serverless good for?

Serverless is **good** for

short-running
stateless
event-driven



Serverless is **not good** for

long-running
stateful
number crunching



Microservices



Mobile Backends



Bots, ML Inferencing



IoT



Modest Stream Processing



Service integration



Databases



Deep Learning Training



Heavy-Duty Stream Analytics



Spark/Hadoop Analytics



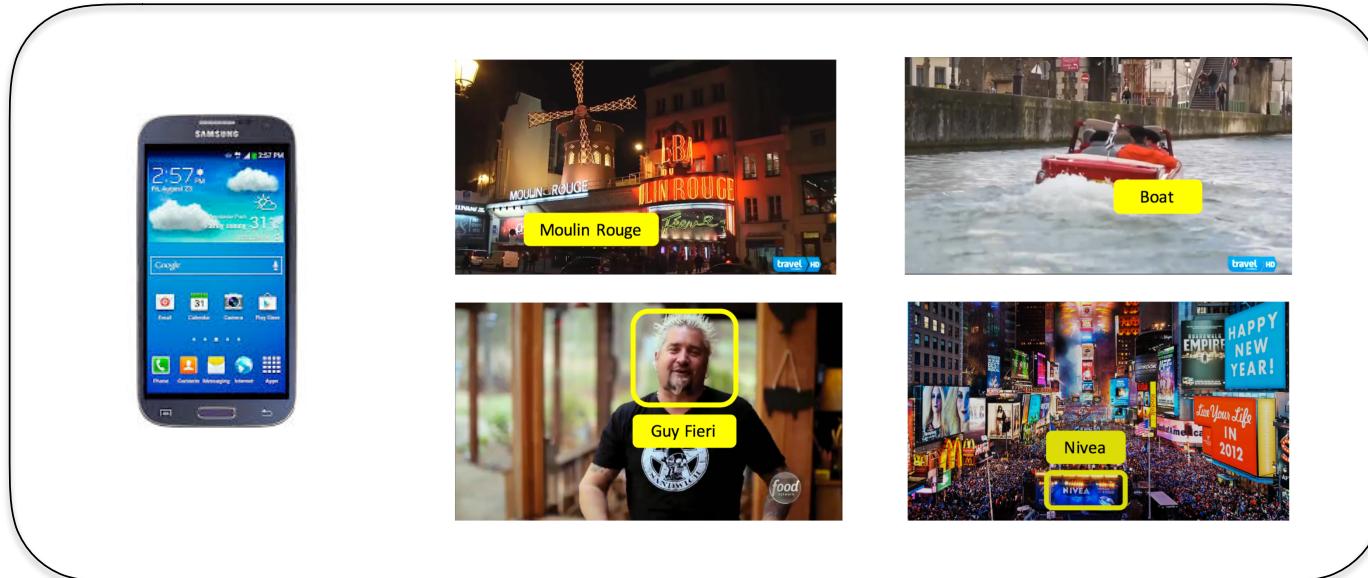
Numerical Simulation



Video Streaming

Dark Vision (Fred Lavigne)

<https://www.youtube.com/watch?v=1teIMpkISg>



1. User uploads video from mobile device
2. Cloud services analyze frames to detect products, objects, faces, text
3. Use results to deliver improved navigation, recommendations, search



Open source

<https://github.com/openwhisk/openwhisk>

High level programming constructs

<https://developer.ibm.com/openwhisk/>

Awesome OpenWhisk

<https://github.com/openwhisk/awesome-openwhisk>

IBM Bluemix OpenWhisk (Beta)

<https://new-console.ng.bluemix.net/openwhisk/>

OpenWhisk - From infrastructure to impact

