

Serverless & Restless

On Lee

CTO of GDP Venture, GDP Labs and COO & CTO of KASKUS

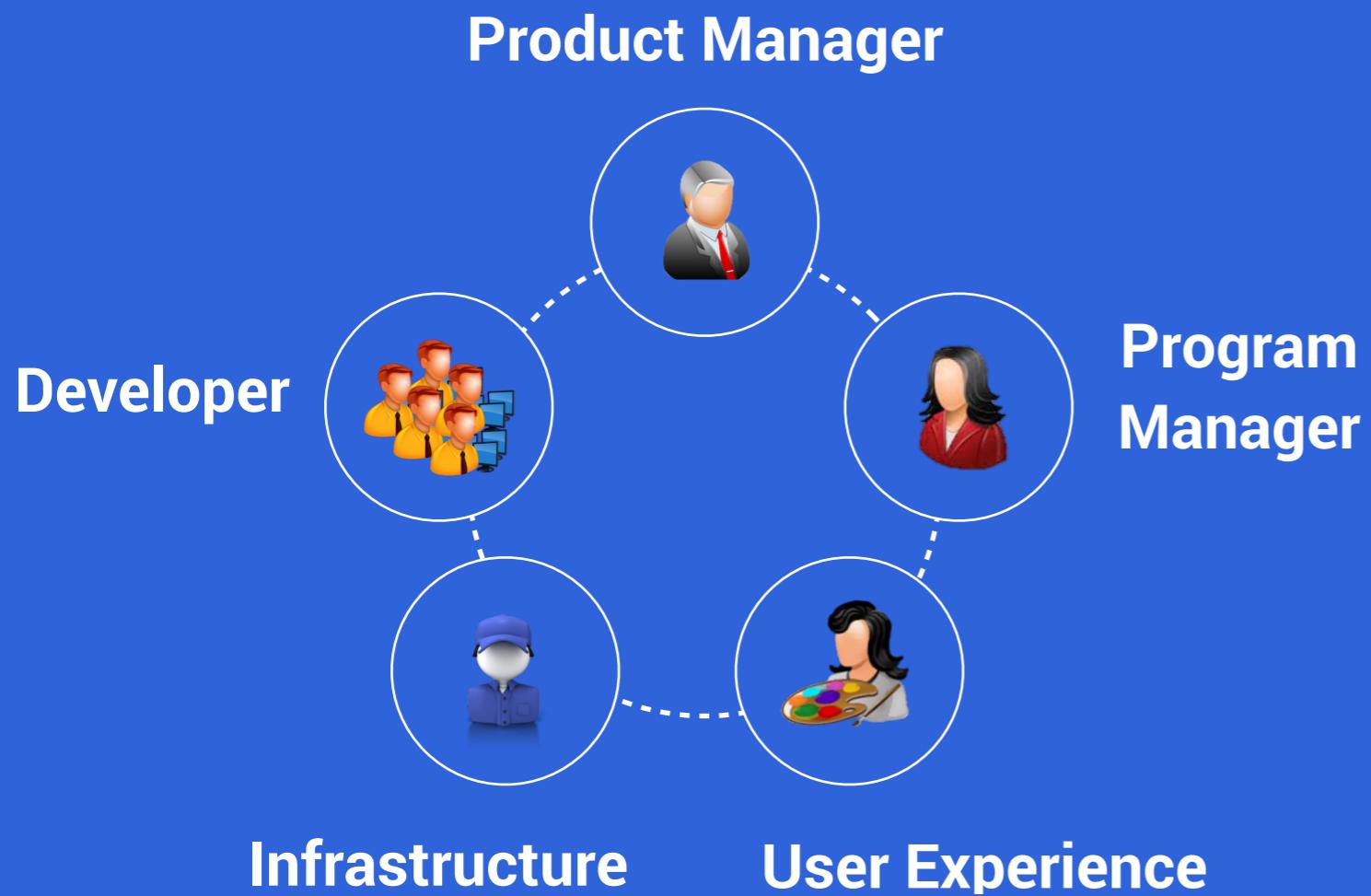


linkedin.com/in/onlee



MARTIN HARTONO
CEO

ON LEE
CTO



**150 PEOPLE
AND GROWING**

MAJORITY ARE MILLENIALS

Background:
Teaching assistant
Research Assistant
Competitive programmers

ABOUT GDP LABS



INTERNATIONAL & NATIONAL PROGRAMMING COMPETITIONS



Founded:
June 2012



Location:
Jakarta, Bandung, Yога



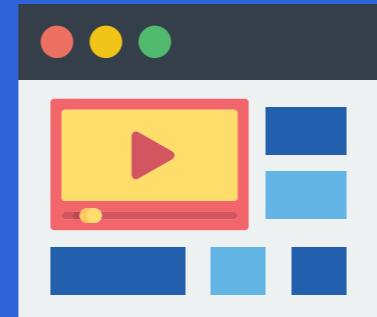
The war for talent ("shortage") refers to an increasingly competitive landscape for recruiting and retaining talented employees in software and internet industry globally including **Indonesia**

DIFFERENTIATORS

**Engineering
Centric**

Well-rounded

Core Value



Continuous Learning

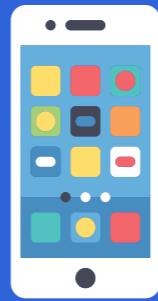


Sharing



- Help sister companies
- Incubate startups
- Keep learning new technologies

What We Do



Technologies

Mobile



Social Media

Internet



Cloud

Machine Learning



Products

- Chatting Platform
- HR & Payroll Platform
- Programming Assistant Platform
- Social Media Platform



Explore topics

Worldwide ▾

2004 - present ▾

All categories ▾

Web Search ▾

Compare [Search terms ▾](#)

serverless

Search term

+ Add term

Interest over time [?](#)

News headlines [?](#)

Forecast [?](#)



</>



Explore topics

Worldwide ▾

2004 - present ▾

All categories ▾

Web Search ▾

Compare

Search terms ▾

graphql
Search term

+ Add term

Interest over time

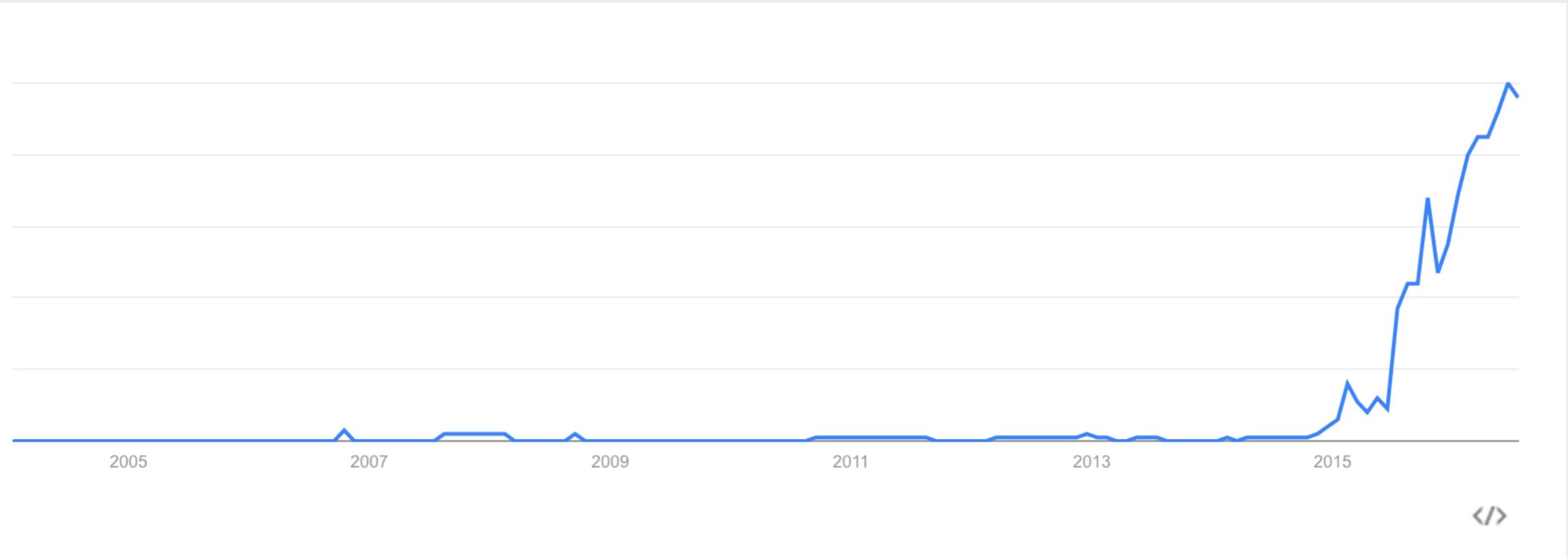


News headlines

Forecast



?

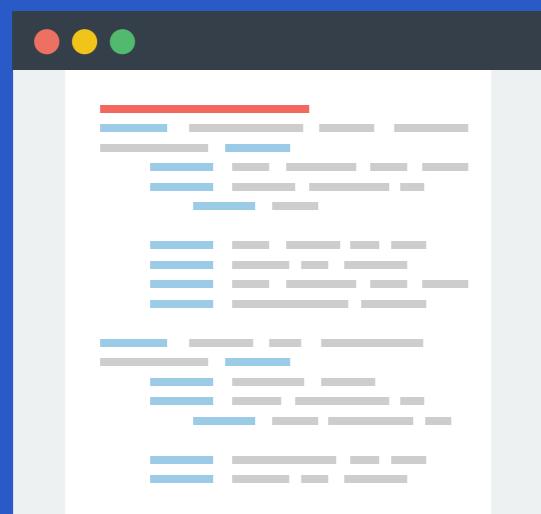


Software Development Evolution

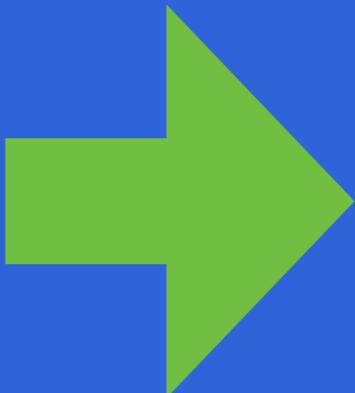


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Software Development Tool

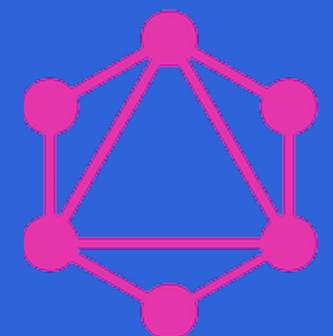


Text Editor



Integrated Development
Environment
(IDE)

API



Local

Simple Object
Access Protocol
(SOAP)

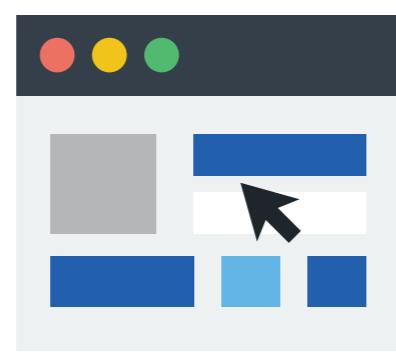
Representational
State Transfer
(REST)

GraphQL

Application



CLI



GUI



Internet

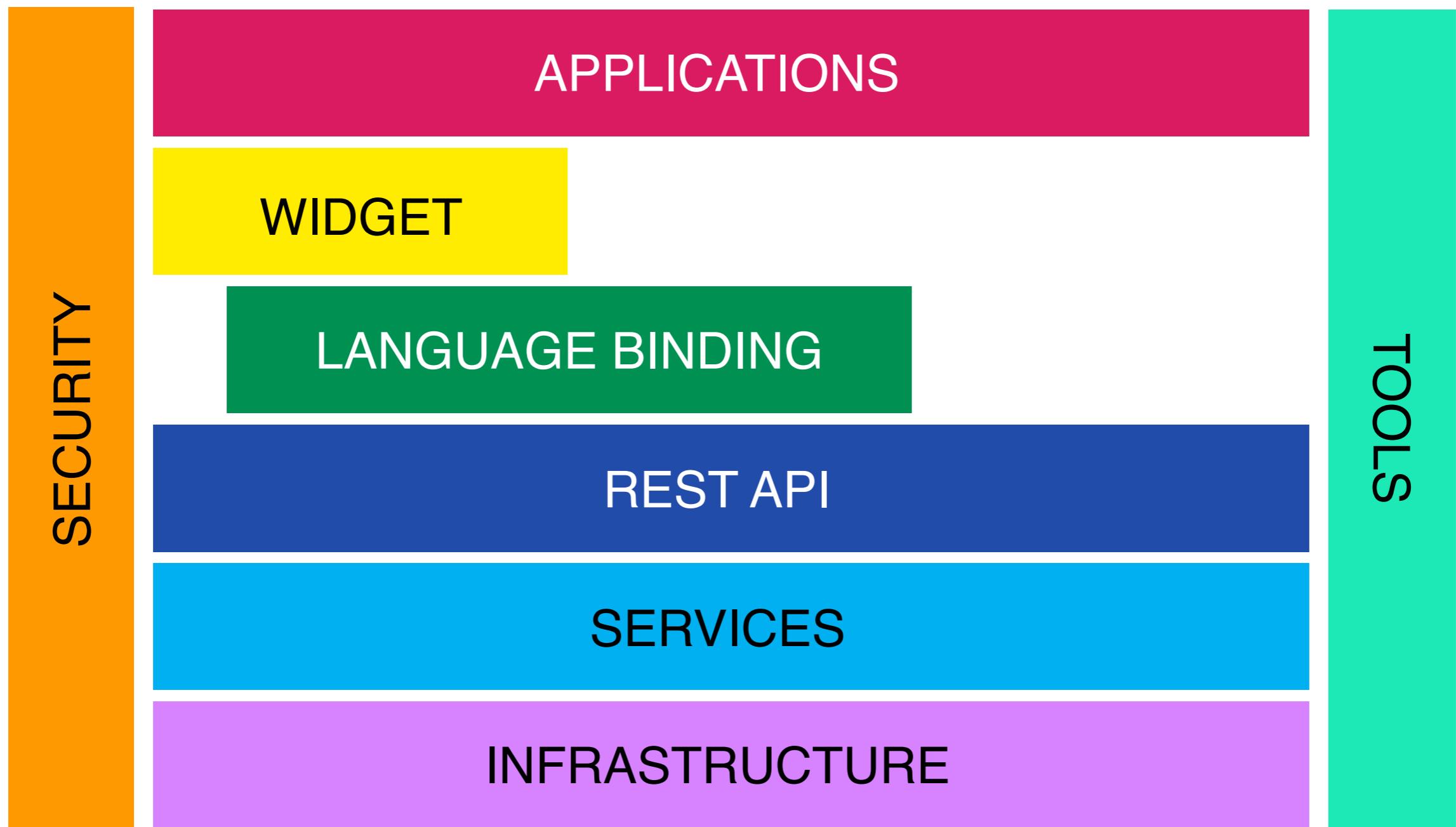


Mobile

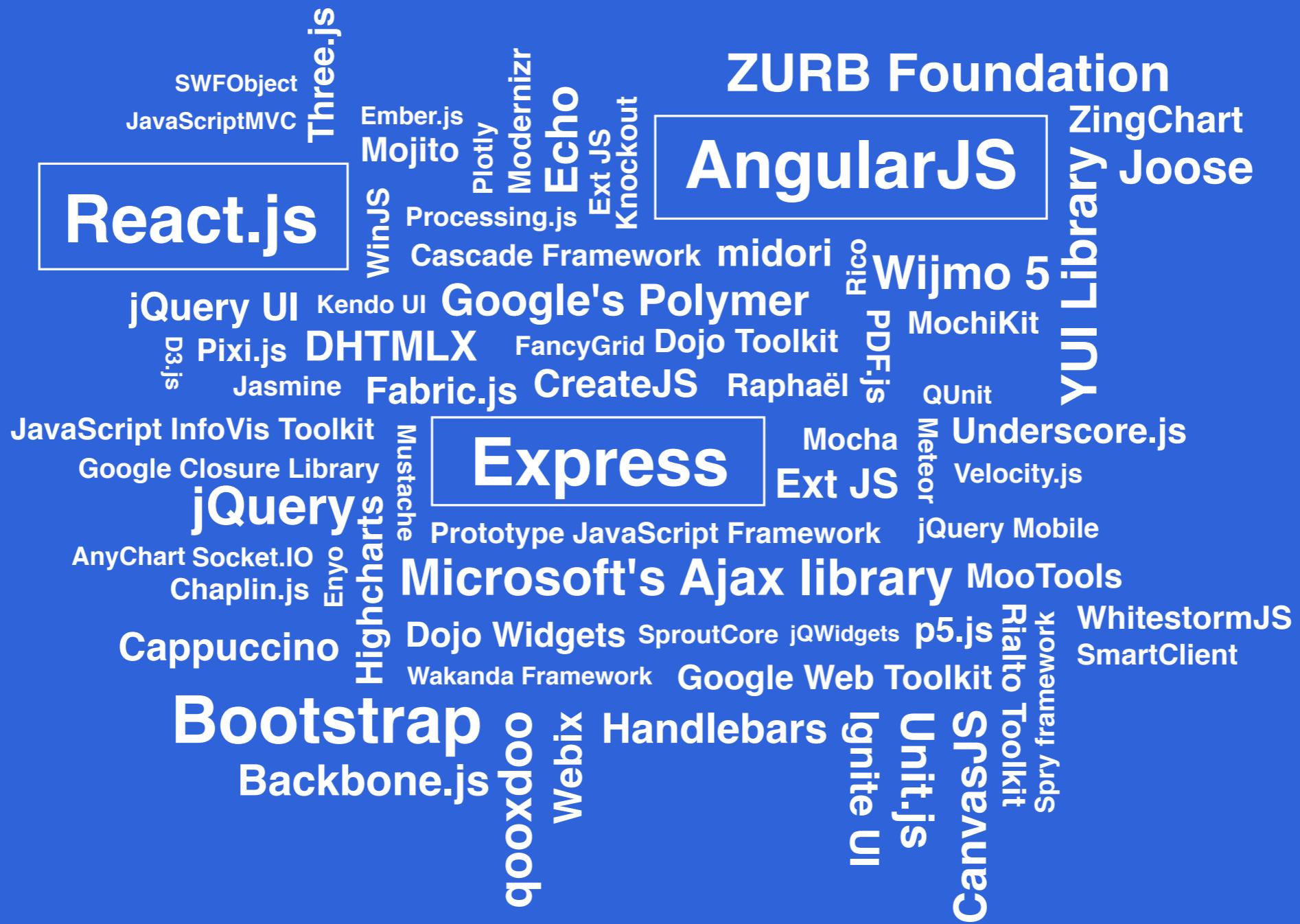
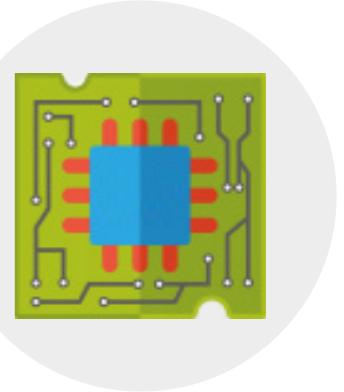


IoT

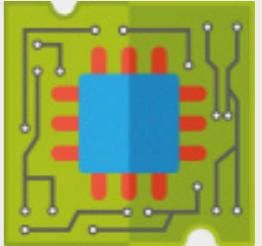
Block Diagram



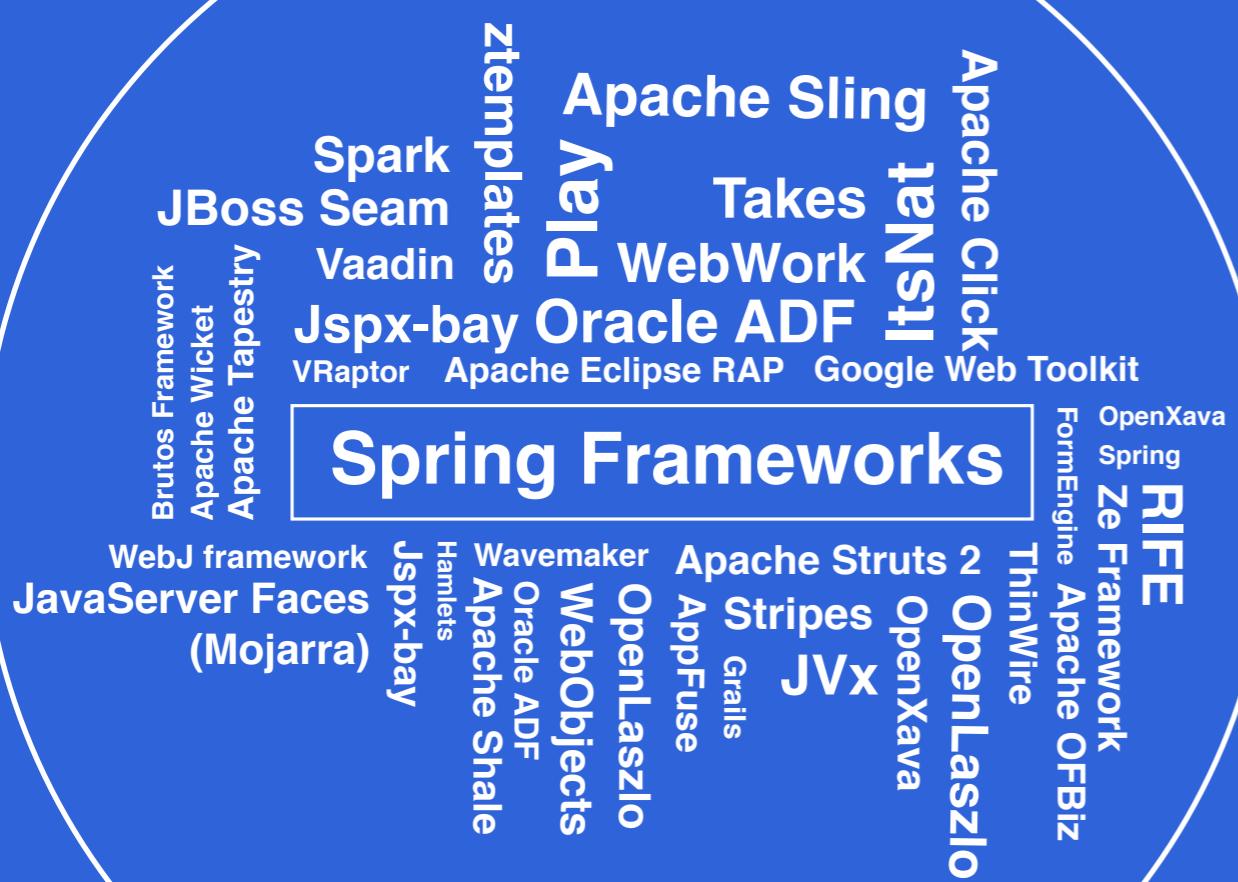
Front-End Technologies



Back-End Technologies



Java



PHP



Python



Microservice Architecture



While there is no precise definition of this architectural style, there are certain common characteristics around organization around business capability, automated deployment, intelligence in the endpoints, and decentralized control of languages and data.

Serverless Architecture



It refer to applications that significantly depend on third-party services (knows as Backend as a Service or "BaaS") or on custom code that's run in ephemeral containers (Function as a Service or "FaaS"), the best known vendor host of which currently is AWS Lambda.

By using these ideas, and by moving much behavior to the front end, such architectures remove the need for the traditional 'always on' server system sitting behind an application.

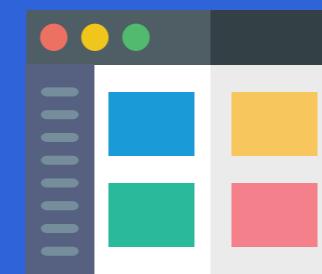
Depending on the circumstances, such systems can significantly reduce operational cost and complexity at a cost of vendor dependencies and (at the moment) immaturity of supporting services.



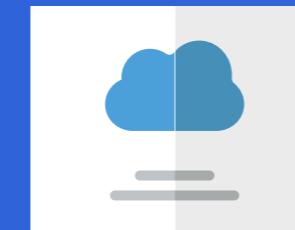
X
as a
Service



FaaS
Functions as a Service



SaaS
Software as a Service



PaaS
Platform as a Service



IaaS
Infrastructure as a Service

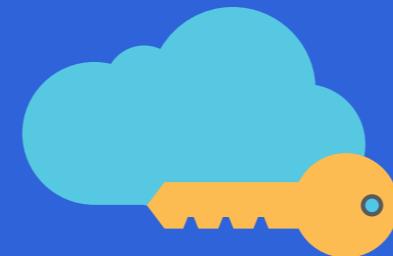
APPS



Serverless Challenges



Unknown



Vendor Specific



Stateless

0001
1001
0100
0111

New Programming
Model



Lost of Server
Control



Testing

Serverless Benefits



Save Cost

- Pay per user by 100 ms granularity
- No capital expense
- Operational
- Development
- Scaling (peak traffics)



Deployment



Quick Turnaround

Sample Implementation

Serverless wiki (internal GDP Labs)



AWS S3



AWS Lambda



HTML 5



HTML 5



Javascript



TypeScript



Angular 2



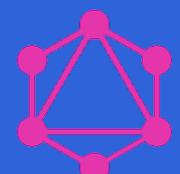
HTML 5



Java



Spring



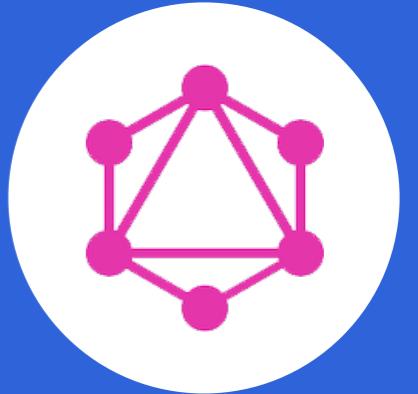
GraphQL

AWS Lambda Dev. Guide



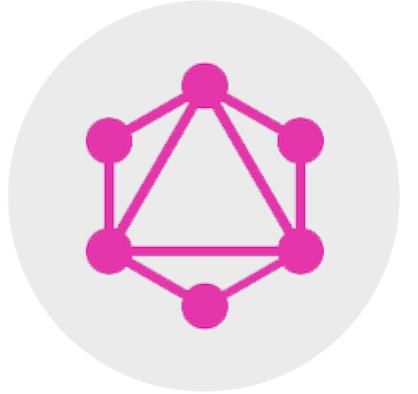
- **(page 12)**
Amazon S3 Pushes Events
and Invokes a Lambda
Function
- **(page 63)**
Programming Model for
Authoring Lambda Functions
in Java
- **(page 65, 66)**
Java HelloWorld code
- **(Java, page 74)**
The Context Object

A GraphQL query



is a string that is sent to a server
to be interpreted and fulfilled,
which then returns JSON back to the client.

Source: <https://code.facebook.com/posts/1691455094417024>

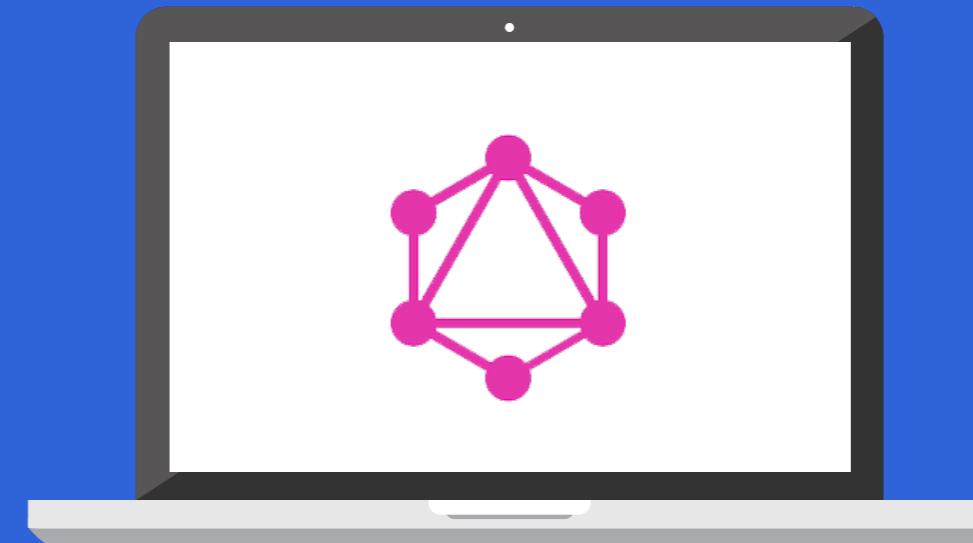


- [GraphQL vs REST API](#)
- [Getting Started](#)
 - [JavaScript version](#)
 - [Java version](#)
- [Star War API - GraphiQL Tool](#)
- [Wrapping a REST API in GraphQL](#)

Summary



Serverless (Functions as a Service)



GraphQL (Beyond REST API)

WE ARE HIRING!



jobs@gdplabs.id

THANK YOU

Q&A