

Engenharia de Plataformas

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IA

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DevEx

GABRIEL MACHADO

Cargo: Desenvolvedor
no Banco do Brasil

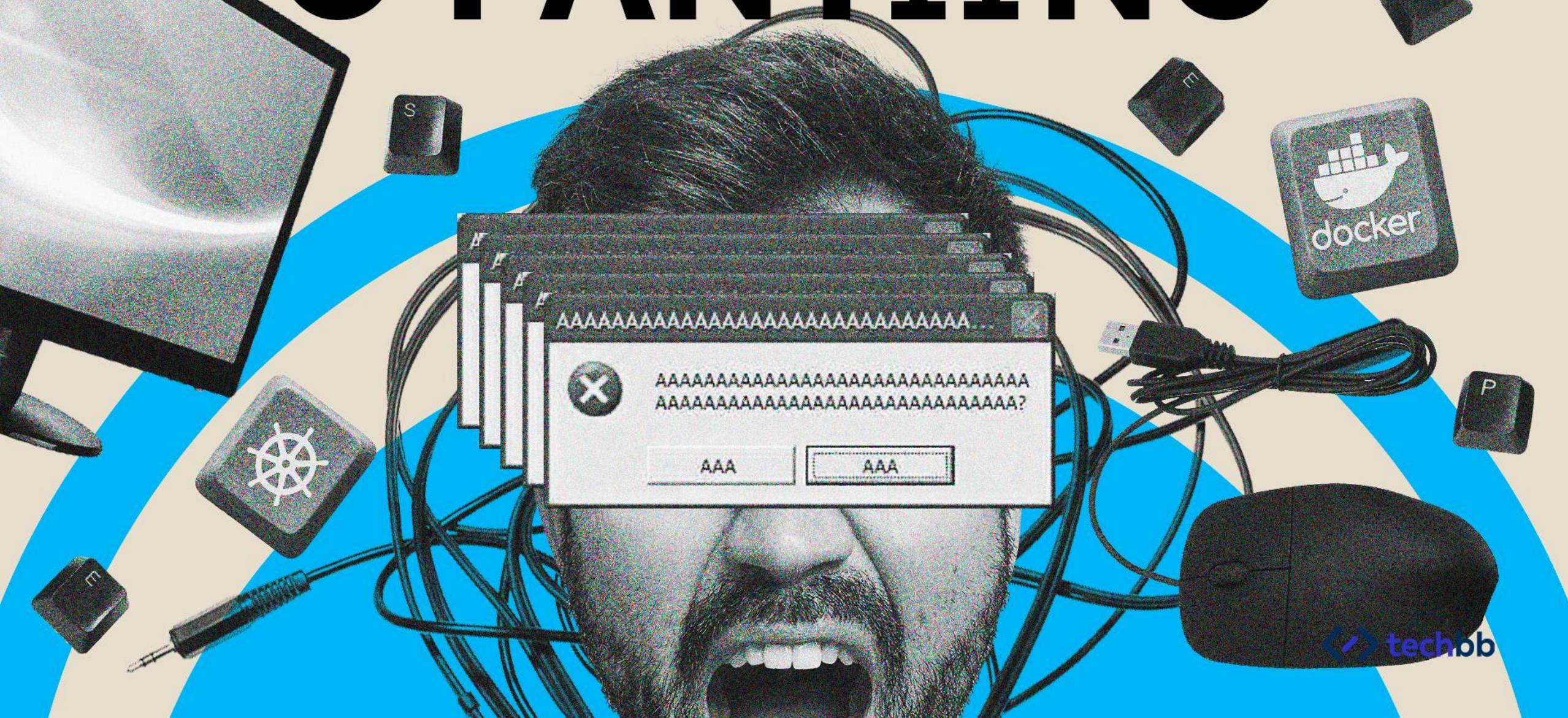
Atualmente atuando na
frente de Ferramentas
para Desenvolvedores;
JiuJiteiro de araque e
apreciador de bons
restaurantes.



WATERFALL AGILIDADE DEV OPS

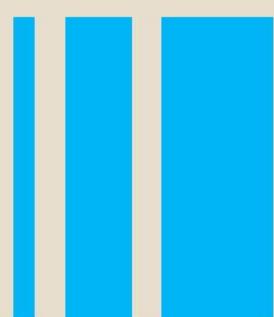


O PÂNTANO



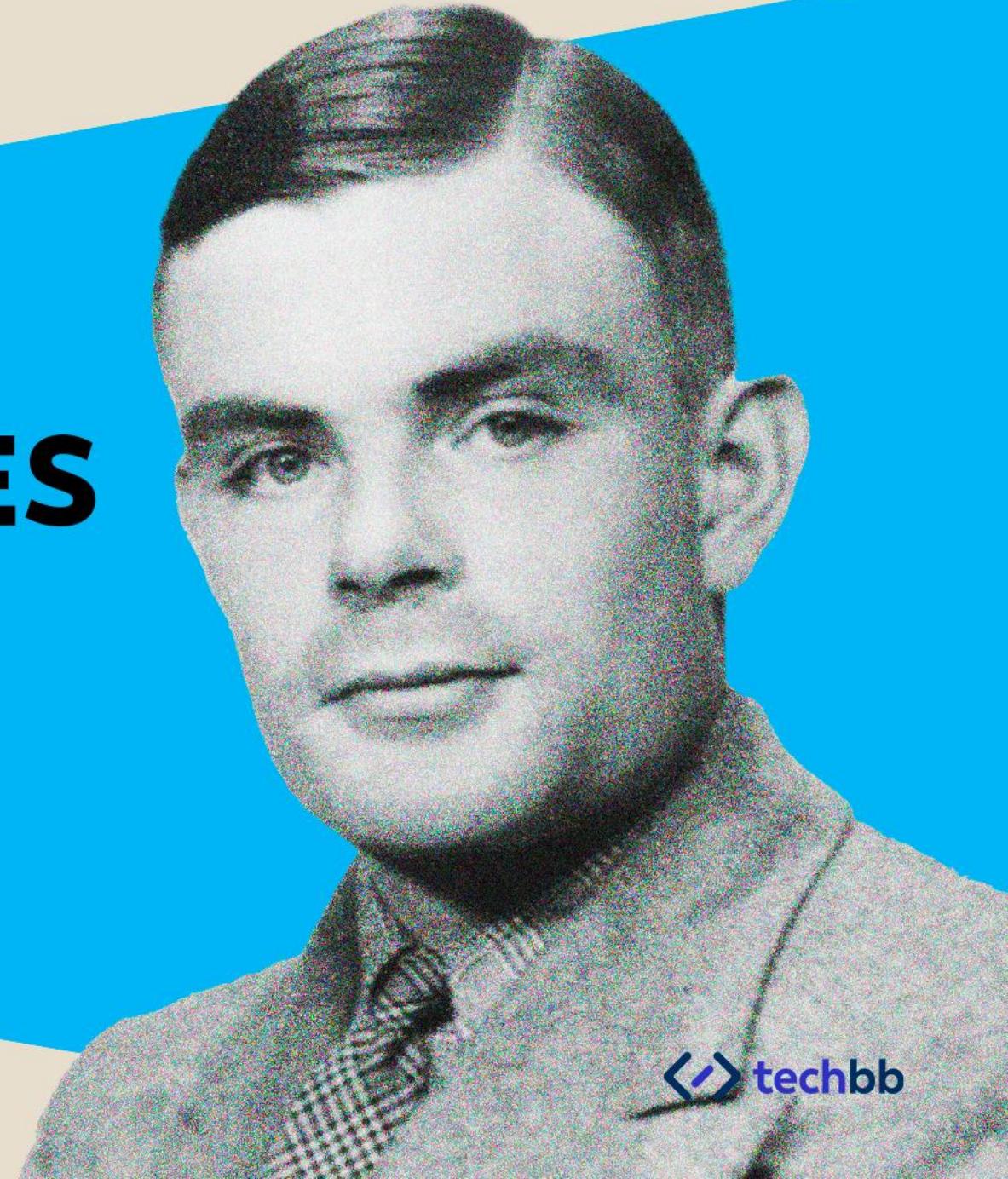
ENGENHARIA DE PLATAFORMAS

E DEVEX



“CAN MACHINES THINK?”

Alan Turing

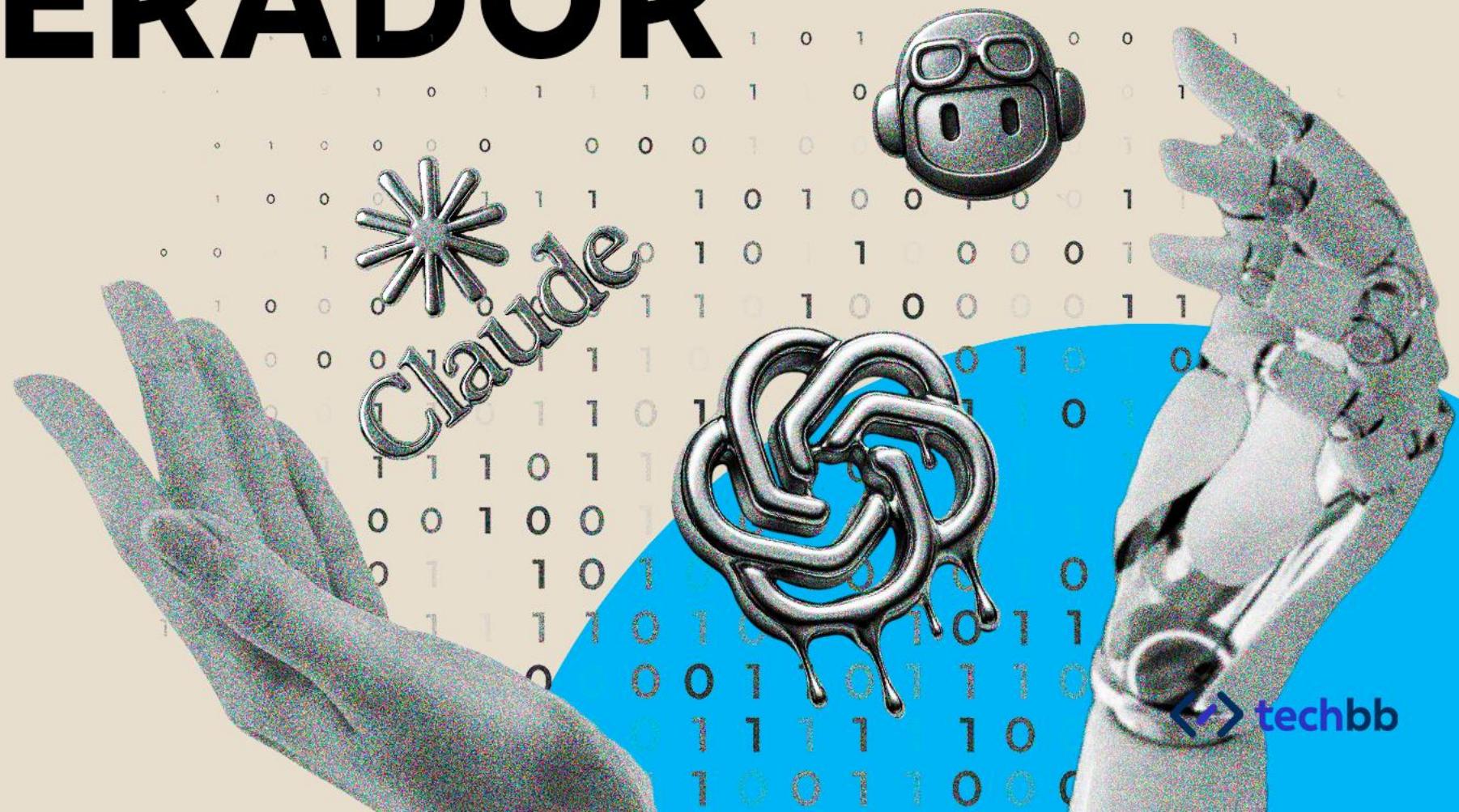


"ATTENTION IS ALL YOU NEED"

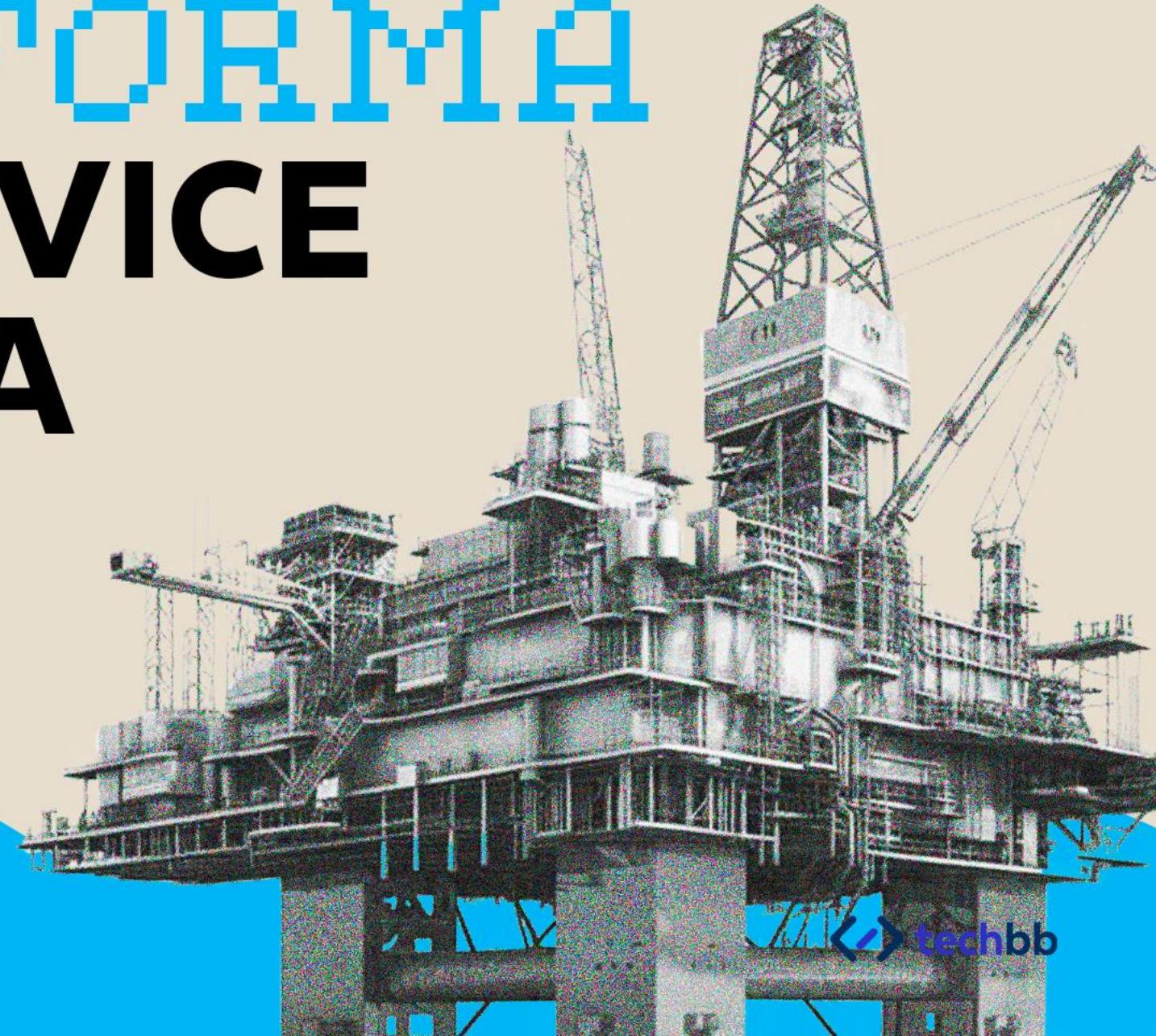
Ashish Vaswani, Noam Shazeer, Niki Parmar, Jakob Uszkoreit,
Llion Jones, Aidan N. Gomez, Łukasz Kaiser, and Illia Polosukhin



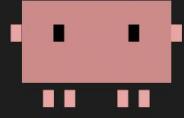
IA COMO ACELERADOR



PLATAFORMA SELF SERVICE AGÊNTICA



 techbb



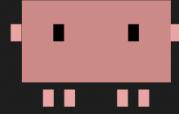
Claude Code v2.0.1

Sonnet 4.5 · API Usage Billing

/Users/gabrielmachado/Documents/1-projects/idp-full-demo

> /project█

- | | |
|------------------|---|
| /observe-service | Observe the status of Kubernetes resources: (project) |
| /create-service | Create Kubernetes manifests: (project) |
| /delete-service | Delete Kubernetes services: (project) |
-



Claude Code v2.0.1

Sonnet 4.5 · API Usage Billing

/Users/gabrielmachado/Documents/1-projects/idp-full-demo

> /create-service is running...

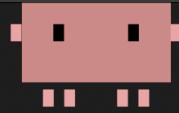
- I'll help you create Kubernetes manifests for Crossplane Composite Resources. Let me start by discovering what's available in your cluster.
- **Bash**(kubectl get crds -o json | jq -r '.items[] | select(.spec.group == "devopstoolkit.live") | select(.spec.names.categories[] == "claim") | {name: .metadata.name,...})
 - └ Running...
- **Bash**(kubectl get compositions -o json)
 - └ Waiting...

Bash command

```
kubectl get crds -o json | jq -r '.items[] | select(.spec.group == "devopstoolkit.live") | select(.spec.names.categories[] == "claim") | {name: .metadata.name, kind: .spec.names.kind, group: .spec.group, version: .spec.versions[0].name}'  
Discover Crossplane Claims with devopstoolkit.live API
```

Do you want to proceed?

- > 1. Yes
- 2. Yes, and don't ask again for **kubectl get** commands in
/Users/gabrielmachado/Documents/1-projects/idp-full-demo
- 3. No, and tell Claude what to do differently (esc)



Claude Code v2.0.1

Sonnet 4.5 · API Usage Billing

/Users/gabrielmachado/Documents/1-projects/idp-full-demo

```
> /create-service is running...
```

- I'll help you create Kubernetes manifests for Crossplane Composite Resources. Let me start by discovering what's available in your cluster.
- **Bash**(kubectl get crds -o json | jq -r '.items[] | select(.spec.group == "devopstoolkit.live") | select(.spec.names.categories[] == "claim") | {name: .metadata.name,...})
 - └ {
 - "name": "appclaims.devopstoolkit.live",
 - "kind": "AppClaim",
 - ... +9 lines (ctrl+o to expand)
- **Bash**(kubectl get compositions -o json)
 - └ Running...

Bash command

```
kubectl get compositions -o json  
Get all available Compositions
```

Do you want to proceed?

- › 1. Yes
- 2. Yes, and don't ask again for **kubectl get** commands in
/Users/gabrielmachado/Documents/1-projects/idp-full-demo
- 3. No, and tell Claude what to do differently (esc)

... +17 lines (ctrl+o to expand)

-  **Available Composite Resources**

I've found the following resources you can create:

1. AppClaim 

- **Purpose:** Deploy containerized applications to Kubernetes with automatic CI/CD setup
- **Creates:** Kubernetes Deployment, Service, Ingress, optional HPA (auto-scaling), optional CI pipeline, optional database integration
- **Composition:** app-backend (label: location=local, type=backend)
- **Best for:** Deploying backend applications with full infrastructure

2. GitHubClaim 

- **Purpose:** Create and initialize a new GitHub repository with standard files
- **Creates:** GitHub repository with initial branch, PR, devbox config, README, and optional Go application template
- **Composition:** github
- **Best for:** Setting up new project repositories with standardized structure

Which resource would you like to create? (Type **1** or **2**)

> 1

application template
– **Composition:** github
– **Best for:** Setting up new project repositories with standardized structure

Which resource would you like to create? (Type **1** or **2**)

> 1

- **Bash**(kubectl get namespaces -o jsonpath='{range .items[*]}{.metadata.name}{"\n"}{end}' | grep team)
 - └ a-team
 - └ b-team
- **Bash**(kubectl get ingressclasses -o jsonpath='{range .items[*]}{.metadata.name}{"\n"}{end}'')
 - └ nginx
- Perfect! Let's configure your **AppClaim** resource. I'll ask you a series of questions to gather the necessary information.

Configuration Questions

1. Metadata: Name

What name would you like to give this application? (e.g., my-app, backend-service, api-server)

> rec-n-play-api█

- **Bash**(kubectl get ingressclasses -o jsonpath='{range .items[*]}{.metadata.name}{"\n"}{end}')
└ nginx
- Perfect! Let's configure your **AppClaim** resource. I'll ask you a series of questions to gather the necessary information.

Configuration Questions

1. Metadata: Name

What name would you like to give this application? (e.g., my-app, backend-service, api-server)

```
> rec-n-play-api
```

● 2. Metadata: Namespace

Which namespace should this application be deployed to?

1. a-team
2. b-team

Please select 1 or 2:

```
> 1
```

- 3. Container Image (Required)

What is the full container image path? (e.g., ghcr.io/vfarcic/silly-demo, docker.io/myorg/myapp)

```
> https://hub.docker.com/r/gabesmachado/rec-n-play-api
```

- I need the container image in the format registry/organization/image rather than a URL.

Based on the Docker Hub URL you provided, the image should be:

docker.io/gabesmachado/rec-n-play-api

Or simply:

gabesmachado/rec-n-play-api

Is this correct? (Type **yes** or provide the correct image path)

```
> yes
```

- 4. Image Tag (Required)

What tag/version of the image should be deployed? (e.g., latest, 1.0.0, v2.3.1)

```
> latest█
```

(Type the port number or type **skip** to use default)

> 80

● 6. Host Address

What hostname should be used for the Ingress (external access)?

Default: devopstoolkit.live

(Type the hostname or type **skip** to use default)

> skip

● 7. Auto-Scaling (HPA)

Would you like to enable Horizontal Pod Autoscaling?

1. Yes – Enable auto-scaling (specify min/max replicas)
2. No – Skip auto-scaling

Please select **1** or **2**:

> □

? for shortcuts

Please select 1 or 2:

> 2

● 8. Database Integration

Does this application need to connect to a database?

1. Yes – Configure database connection (database name, secret name, secret store)
2. No – Skip database configuration

Please select 1 or 2:

> 2

● 9. GitHub Repository

Would you like to enable a GitHub repository for this application?

1. Yes – Configure repository (repository name)
2. No – Skip repository

Please select 1 or 2:

> 1

-
1. Yes – Configure repository (repository name)
 2. No – Skip repository

Please select **1** or **2**:

> **1**

● **10. Repository Name**

What should be the name of the GitHub repository? (e.g., `rec-n-play-api`, `my-backend-repo`)

> **rec-n-play-api**

● **11. CI/CD Pipeline**

Would you like to enable Continuous Integration/Continuous Deployment?

Note: CI requires the repository to be enabled (which you've selected).

1. Yes – Enable CI/CD (configure build and test options)
2. No – Skip CI/CD

Please select **1** or **2**:

> **2**

```
apiVersion: devopstoolkit.live/v1alpha1
kind: AppClaim
metadata:
  name: rec-n-play-api
  namespace: a-team
spec:
  compositionSelector:
    matchLabels:
      location: local
      type: backend
  parameters:
    image: gabesmachado/rec-n-play-api
    tag: latest
    port: 80
    host: devopstoolkit.live
    ingressClassName: nginx
    repository:
      enabled: true
      name: rec-n-play-api
```

Where would you like to save this manifest?

Please provide the file path (e.g., manifests/rec-n-play-api.yaml, apps/rec-n-play-api.yaml):

```
> █
```

```
? for shortcuts
```

Create file

manifests/rec-n-play-api.yaml

```
apiVersion: devopstoolkit.live/v1alpha1
kind: AppClaim
metadata:
  name: rec-n-play-api
  namespace: a-team
spec:
  compositionSelector:
    matchLabels:
      location: local
      type: backend
  parameters:
    image: gabesmachado/rec-n-play-api
    tag: latest
    port: 80
    host: devopstoolkit.live
    ingressClassName: nginx
  repository:
    enabled: true
    name: rec-n-play-api
```

Do you want to create **rec-n-play-api.yaml**?

- › 1. Yes
- 2. Yes, allow all edits during this session (shift+tab)
- 3. No, and tell Claude what to do differently (esc)

```
apiVersion: devopstoolkit.live/v1alpha1
kind: AppClaim
metadata:
  name: rec-n-play-api
  namespace: a-team
spec:
  compositionSelector:
    matchLabels:
      location: local
      type: backend
... +10 lines (ctrl+o to expand)
```

-  **Manifest saved successfully** to manifests/rec-n-play-api.yaml

Next Steps

Would you like to:

1. Apply the manifest directly to the cluster (kubectl apply -f manifests/rec-n-play-api.yaml)
2. Create a pull request with this manifest

Please select **1** or **2**:

```
> 1
```

✗ Auto-update failed · Try **claude doctor** or **npm i -g @anthropic-ai/claude-code**

```
    type: backend  
... +10 lines (ctrl+o to expand)
```

-  **Manifest saved successfully** to manifests/rec-n-play-api.yaml

Next Steps

Would you like to:

1. Apply the manifest directly to the cluster (`kubectl apply -f manifests/rec-n-play-api.yaml`)
2. Create a pull request with this manifest

Please select **1** or **2**:

```
> 1
```

- **Bash**(`kubectl apply -f manifests/rec-n-play-api.yaml`)
 - └ Running...

Bash command

```
kubectl apply -f manifests/rec-n-play-api.yaml  
Apply AppClaim manifest to cluster
```

Do you want to proceed?

- › 1. Yes
- 2. Yes, and don't ask again for `kubectl apply` commands in
/Users/gabrielmachado/Documents/1-projects/idp-full-demo
- 3. No, and tell Claude what to do differently (esc)

The **AppClaim** rec-n-play-api has been created in the a-team namespace!

📦 What's happening now:

Crossplane is now provisioning the following resources:

- Kubernetes Deployment (with your container image)
- Kubernetes Service (ClusterIP on port 80)
- Ingress (using nginx, host: devopstoolkit.live)
- GitHub Repository (rec-n-play-api)

🔍 Monitor the progress:

```
# Check the AppClaim status
```

```
kubectl get appclaim rec-n-play-api -n a-team
```

```
# Check all created resources
```

```
kubectl get app,deployment,service,ingress -n a-team
```

```
# View detailed status
```

```
kubectl describe appclaim rec-n-play-api -n a-team
```

Your application will be accessible at <http://devopstoolkit.live> once all resources are ready!

```
> █
```

```
? for shortcuts
```

```
✗ Auto-update failed · Try claude doctor or npm i -g @anthropic-ai/claude-code
```

- ▶ Bash(sleep 2 && curl -s http://localhost:8080 | head -20)
 - └ <!DOCTYPE html>
 - <html>
 - <head>
 - ... +16 lines (ctrl+o to expand)

- ▶  **Port-Forward Active!**

Your application is now accessible at:

 <http://localhost:8080>

The nginx welcome page is loading successfully! The port-forward is running in the background.

To stop the port-forward later, you can:

```
# Find the process  
ps aux | grep "port-forward"
```

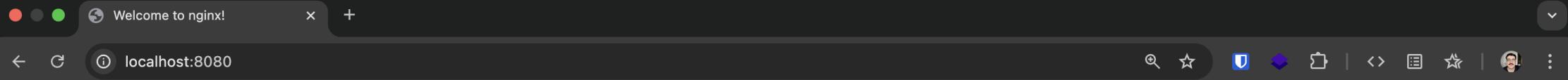
```
# Or I can kill it for you – just let me know
```

You can now open <http://localhost:8080> in your browser to access the application! 

> █

1 background tas ↴ to view

✗ Auto-update failed · Try **claude doctor** or **npm i -g @anthropic-ai/claude-code**



Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.



Overview

Repositories 15

Projects

Packages

Stars 110

Type to search

Gabriel Machado

gabes-machado · he/him

Software Engineer

[Edit profile](#)

13 followers · 38 following

Brasília, Brazil

22:37 (UTC -03:00)

gabesmaxado@gmail.com

<https://orcid.org/0009-0003-4116-7130>[in/gabriellmachado](#)

Find a repository...

Type Language Sort New

rec-n-play-api Public

Updated 5 minutes ago

Star

test-ia-as-idp Public

Updated 2 days ago

Star

constitution-search-mvp Public

JavaScript The Unlicense Updated last week

Star

constitution-search-api Public

TypeScript Updated on Aug 25

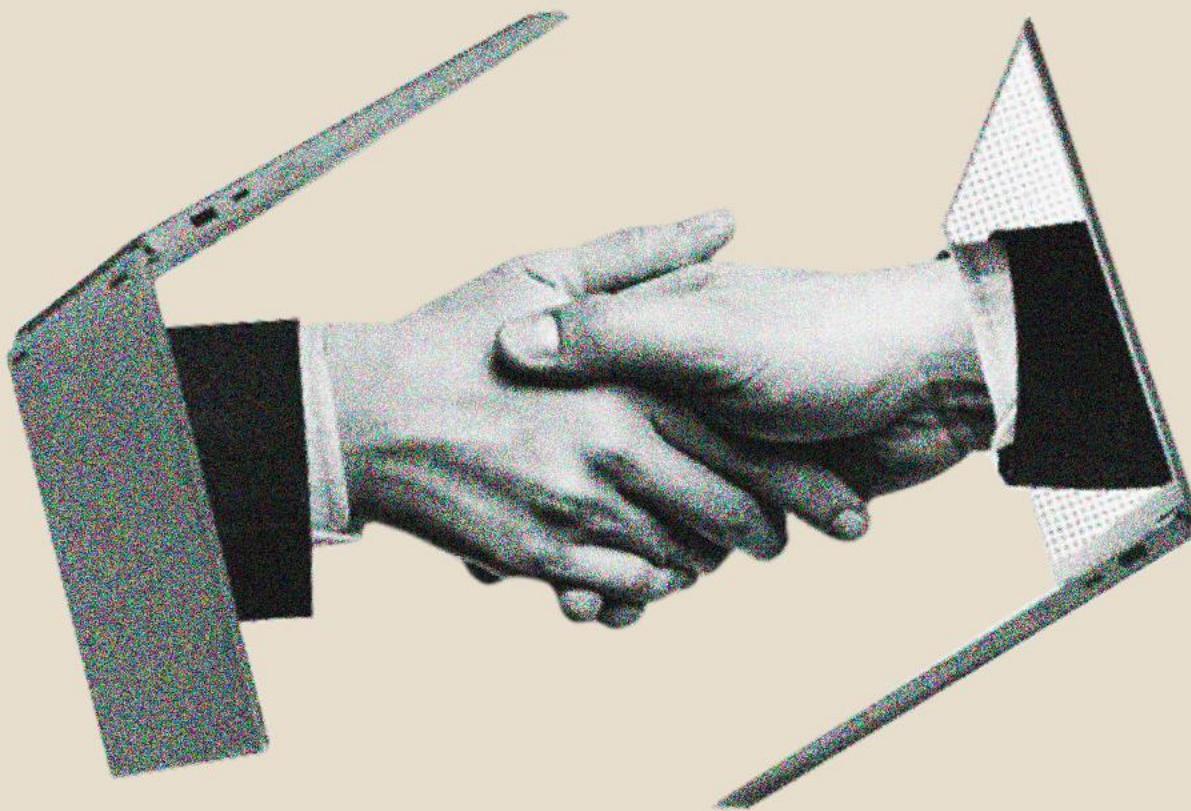
Star

seven-wonders-calculator Public

JavaScript Updated on Aug 2

Star

ISSO É
DEVEX!!

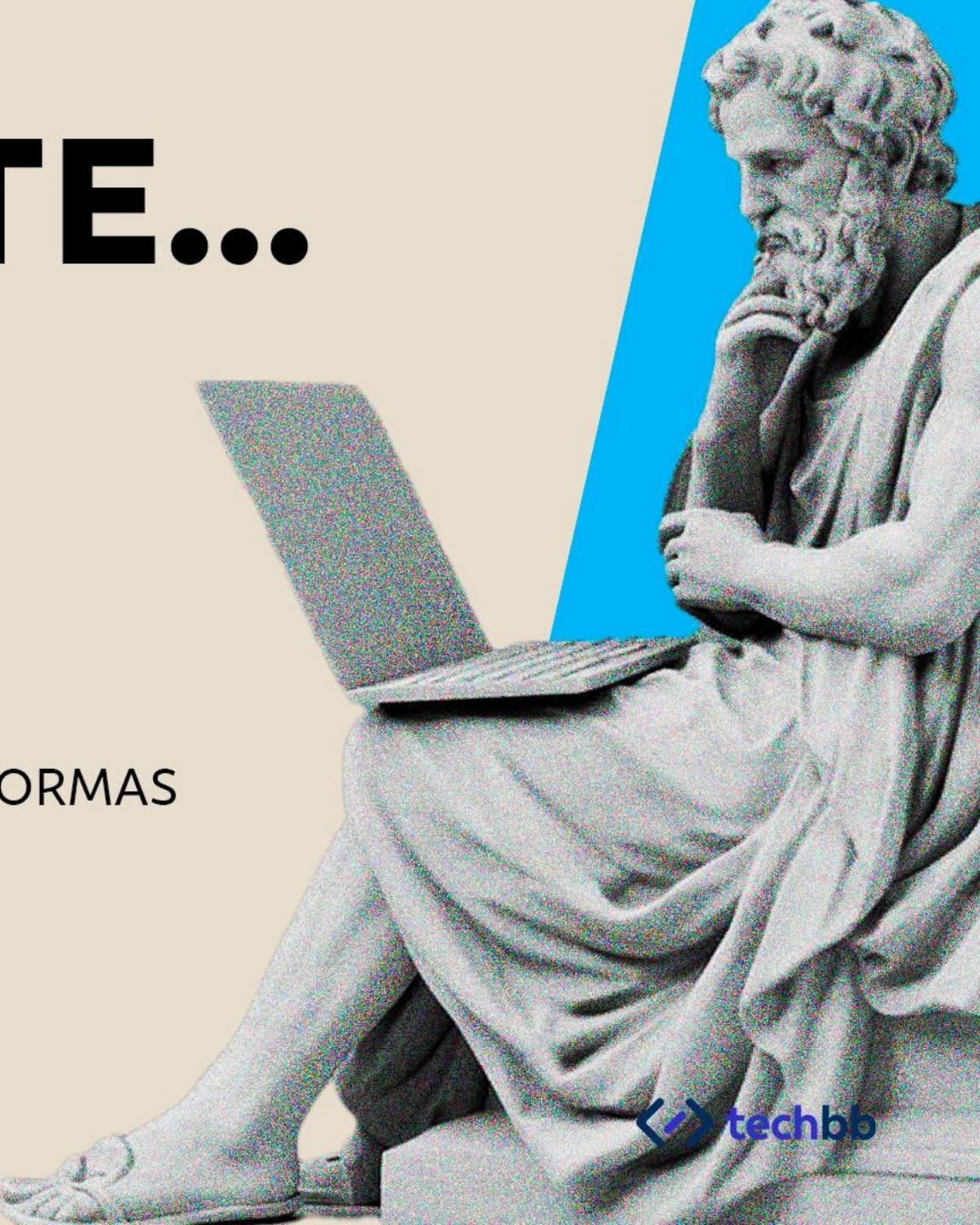
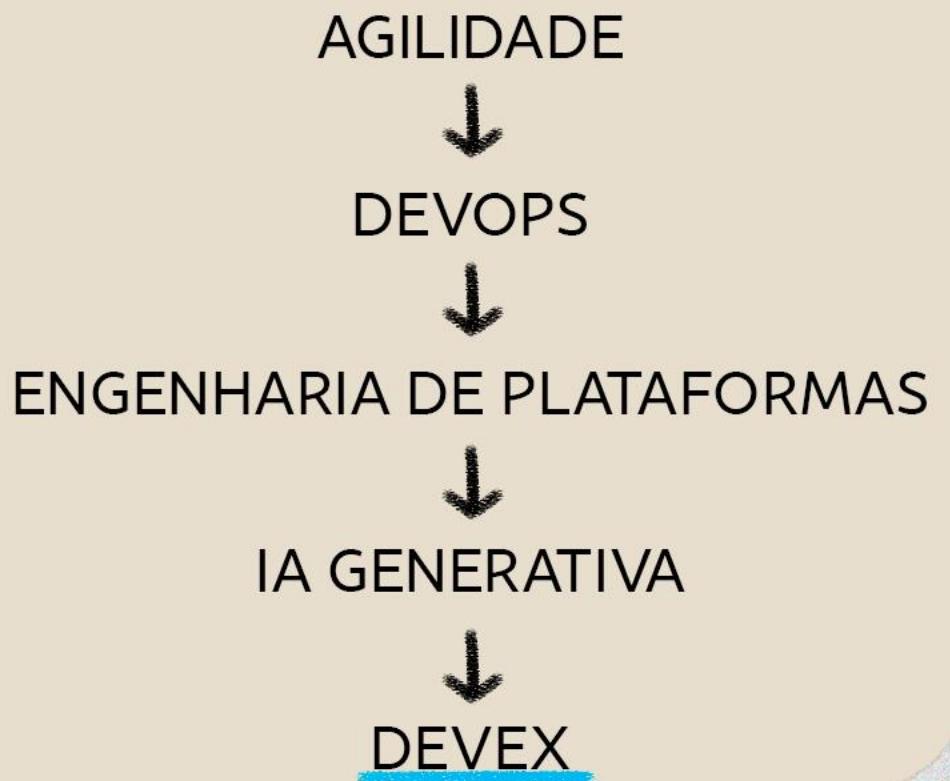


**INTELLIGENT
COGNITIVA**

**QUALIDADE
DE VIDA**
AGILIDADE
**VALOR PARA O
NEGÓCIO**
AUTONOMIA

FINALMENTE...

A EVOLUÇÃO TROUXE DESAFIOS:



Engenharia de Plataformas

+

IA

=

DevEx

OBRIGADO!

**ESSA APRESENTAÇÃO É
OPEN SOURCE!**

