

DEVELOPER OPERATIONS (DEVOPS)

There is 1 show & tell among us

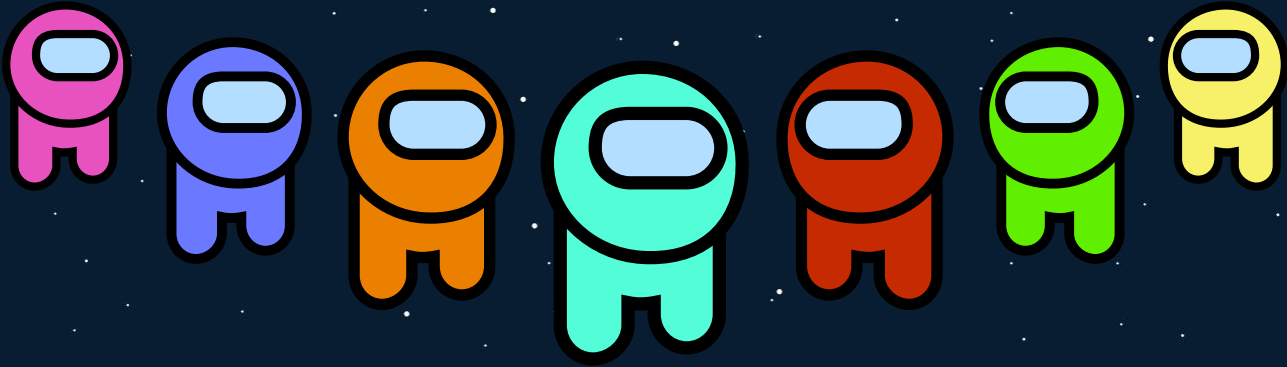


TABLE OF CONTENTS

01

DevOps

DevOps vs Cloud. Is it just tooling?
Growth prospects

02

DevOps Philosophy

Automate, build, test, CI/CD pipelines

03

Software Architecture

The basic principles over why DevOps

04

Service Oriented Architecture

Microservices & Container Orchestration, Docker Demonstration

TABLE OF CONTENTS

05

SOA, New Challenges

Container
Orchestration,
Tagging, Networks,
Monitoring

06

IaaS, PaaS, SaaS

AWS, GCP, pizza, all
that kind of stuff.

07

DevOps SIG

CI/CD Foundation,
MLOps, Cloud Native
Tooling

01

DEVOPS!

DevOps vs Cloud. Is it just
tooling? Growth prospects



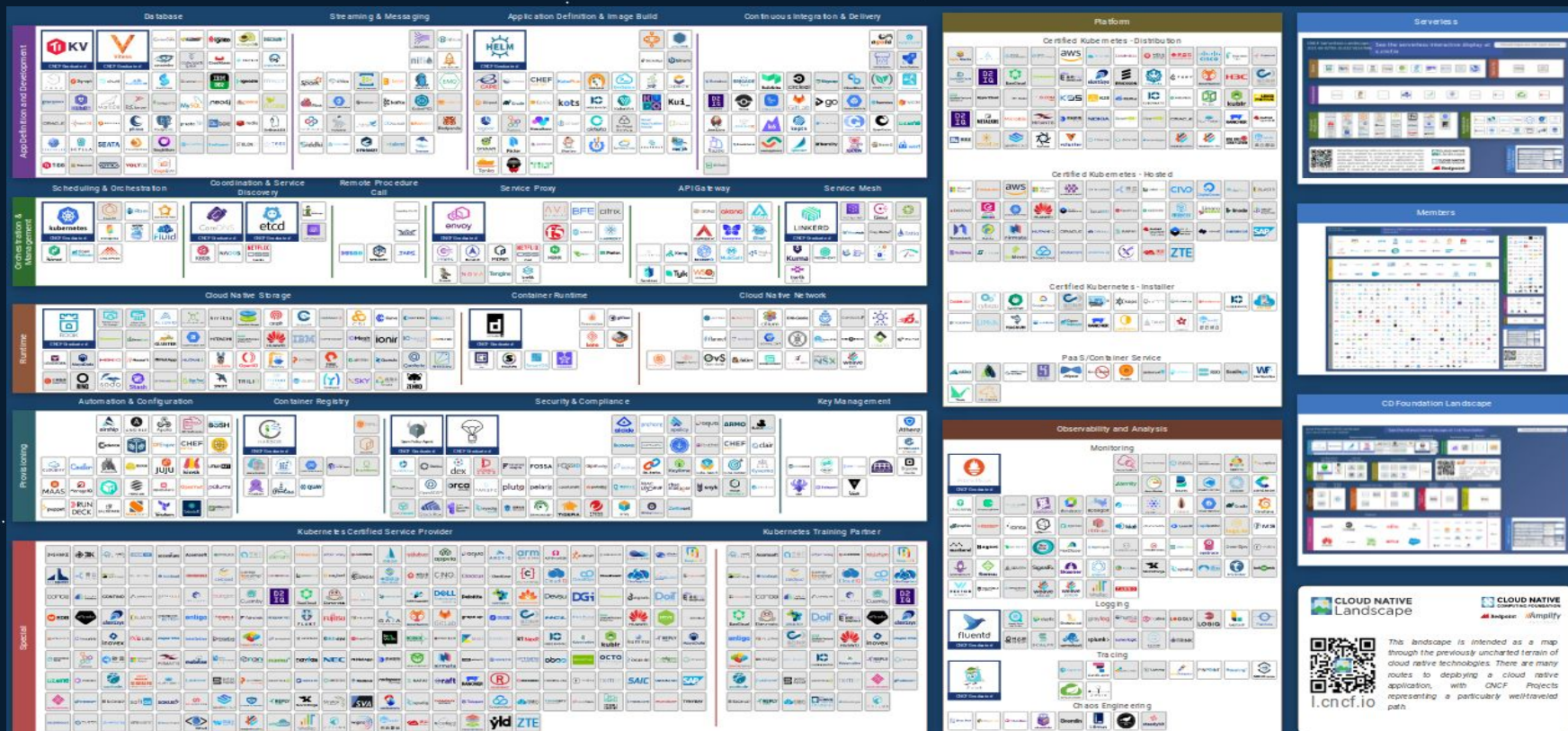
*“Faster delivery of
products through
combination of
practices (**IMPORTANT**)
and tools”*

— SOMEONE FAMOUS (ME)

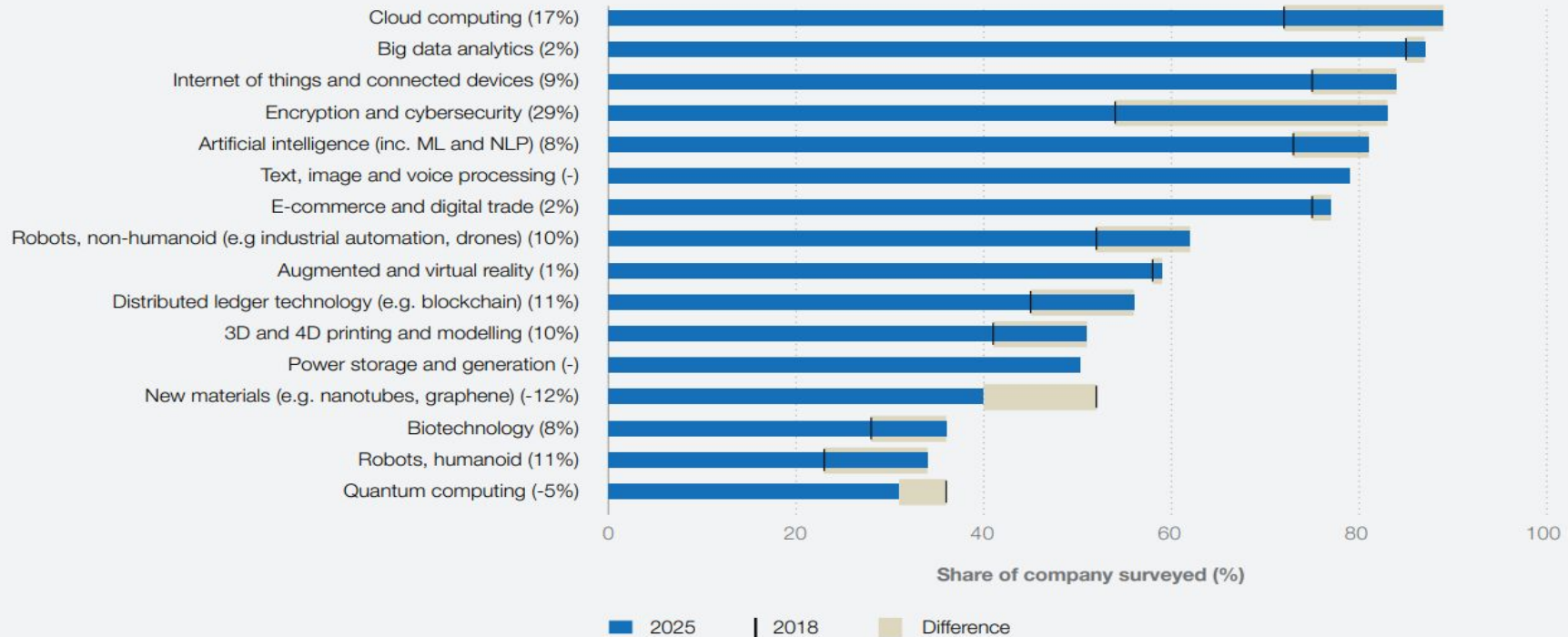
(We'll come back to the Cloud later)

WHAT DO I GET TO WORK WITH?

You are viewing 929 cards with a total of 2,614,739 stars, market cap of \$16T and funding of \$17.1B - CNCF



DEVOPS SOUNDS COOL! HOW QUICKLY IS IT GROWING?



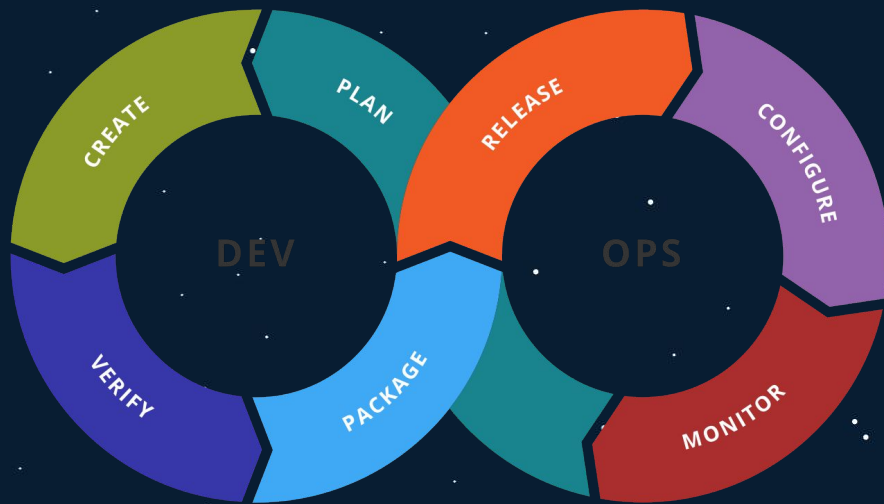
Source

Future of Jobs Survey 2020, World Economic Forum.

02

THE PHILOSOPHY

Automation, Building, CI/CD



WHERE THE CONFLICT COMES FROM



Developers

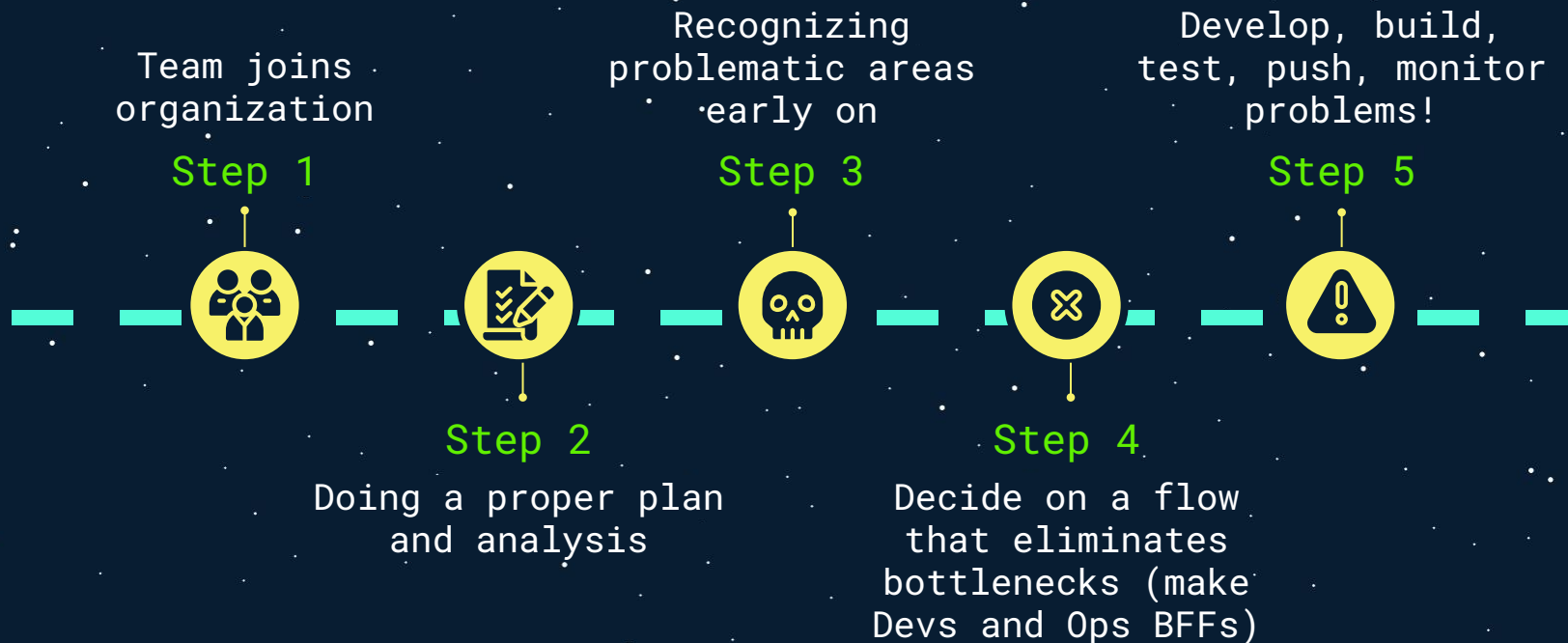
"Congratulations, you're a member of the developers. You're focus is on making features as fast as possible while getting paid for it"



Operations

"Congratulations, you get sabotaged by the developers. That means you'll want things to be as stable as possible, without changes"

HOW TO DEAL WITH IT?



SO WHAT DOES THE OPS DO?

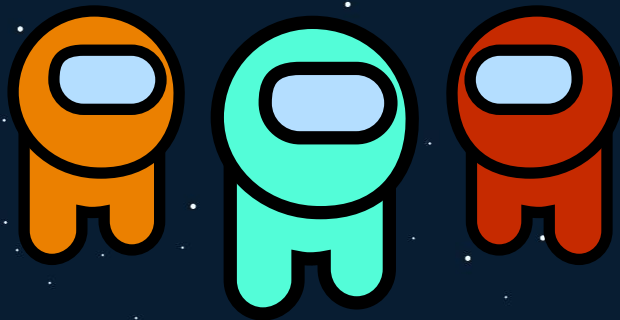
Objective: Production Shipping



Designing
Processes and
Systems



Codebase
configuration,
updating,
troubleshooting



Setting Up
Networking And
Infrastructure



Detecting
outrages,
performance,
bottlenecks

MLH FELLOWSHIP SESSIONS

Introduction To Prometheus/Cloud Native Chaos Engineering/Non Code Contributions

FAUN PUBLICATION

The Must-Know Checklist For DevOps & Site Reliability Engineers

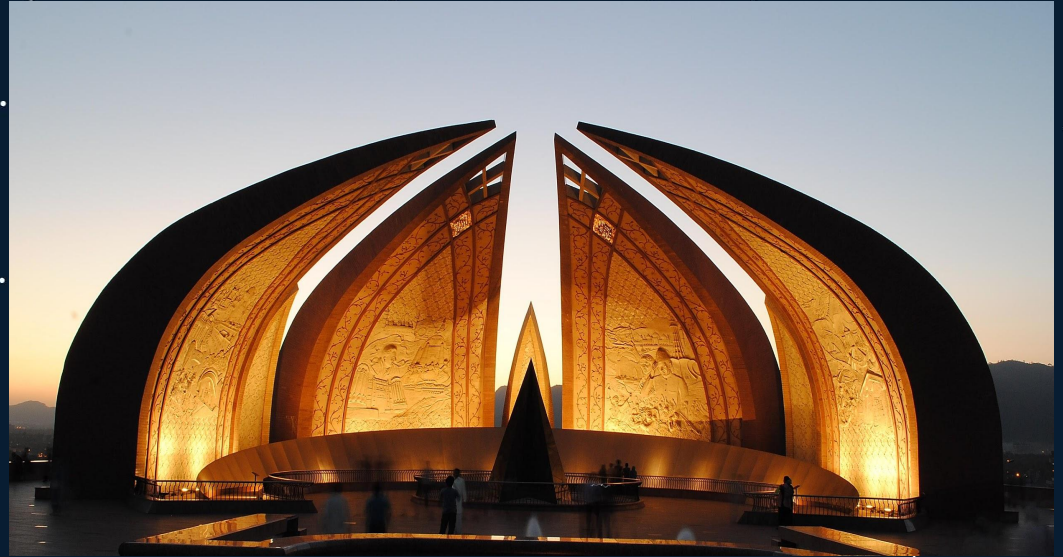
FUN FUN FUNCTION (!!!)

Continuous Integration - What's the point?

03

SOFTWARE ARCHITECTURE

Reliability,
Maintainability,
Scalability, and moving
towards containerization

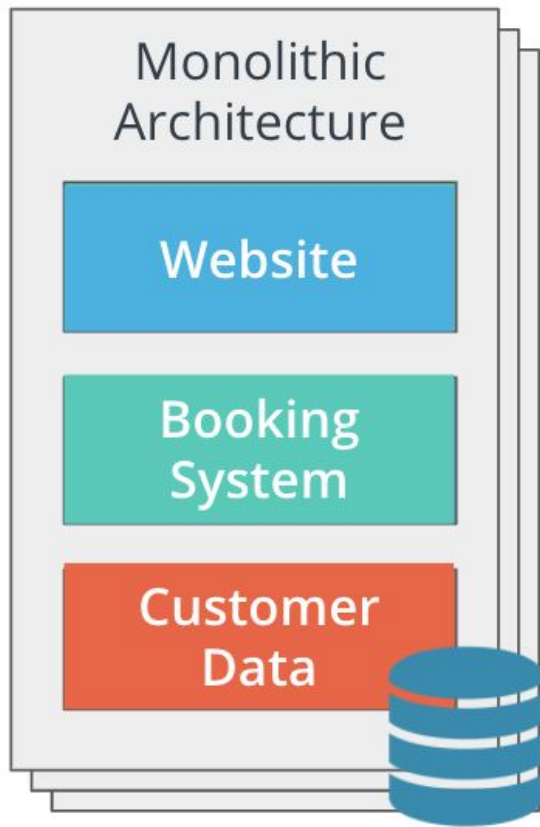


ARCHITECTURES

01

Monoliths

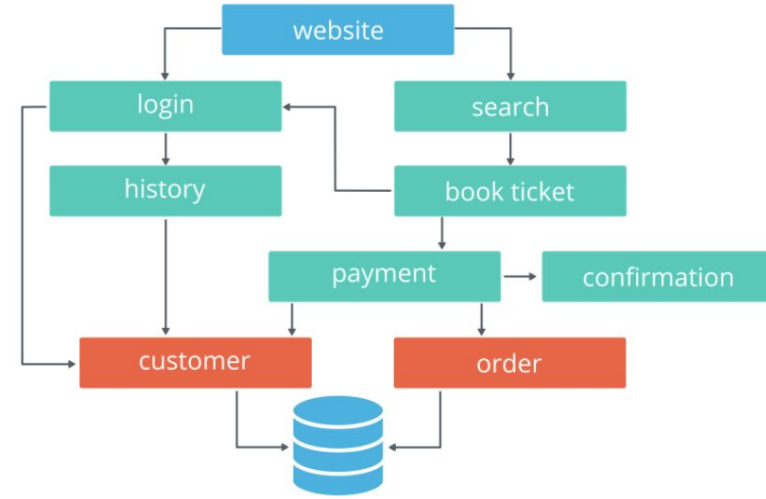
1. Everything is one unit
2. Managed in a single repository
3. Sharing existing resources (CPU & Memory)
4. Mostly single programming language
5. Single binary



02

Microservices

1. Each "service" is managed in a separate repository
2. Every "service" has their own allocated service
3. An API for communication
4. The tools, frameworks, SDKs are of choice
5. Each "service" has its own binary



04

SERVICE ORIENTED ARCHITECTURE

Some best practices before we
move on, or what to expect in
microservices



THE IMPOSTER (MICROSERVICE)

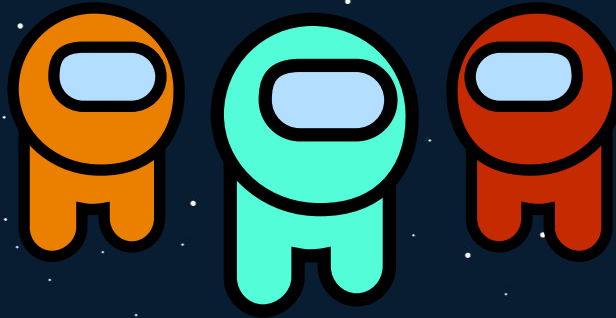
Objective: Services, autonomy,
Reusing components



Health Checks -
how to make
: sure nothing
goes down?



Metrics - for
quantifying
performance



Logging - what
is a service
even doing/



Tracing - how
many services
does one
interact with?



4.1

DOCKER DEMO

Quick show of how Docker
works

05

SOA - NEW CHALLENGES

Microservices brings with it
its own set of challenges

SOA CHALLENGES

TASK	"SOLVED" WITH
Orchestration	Kubernetes
Metrics	Prometheus, Grafana
Configuration Management	Helm
Tagging	Pushing/Pulling from Docker Hub
Networks	Istio, Meshery, Service Meshes

06

IAAS, PAAS, SAAS

But where you even “deploy”
your code base?

WE'RE ALMOST AT
THE END



BUT FIRST, PIZZA AS A SERVICE

Pizza as a Service



07

DEVOPS SPECIAL



INTEREST GROUPS, SIG



Further alternatives you can
look at



CD FOUNDATION

CD Foundation is an open-source community improving the world's ability to deliver software with security and speed.

MLOPS

A set of practices that aims to deploy and maintain machine learning models in production reliably and efficiently.

#ModelMonitoring, #ModelRegistries,
#MachineLearningEngineeringForProduction

1. Deep Learning Specialization

CLOUD NATIVE CLOUD FOUNDATION

All things cloud and cloud native related, open source, community based, funded and has programs for ambassadors

THANKS!

Do you have any questions?

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