Accelerate your workflow from local Python prototype to the cloud

Savannah Ostrowski PyGotham TV

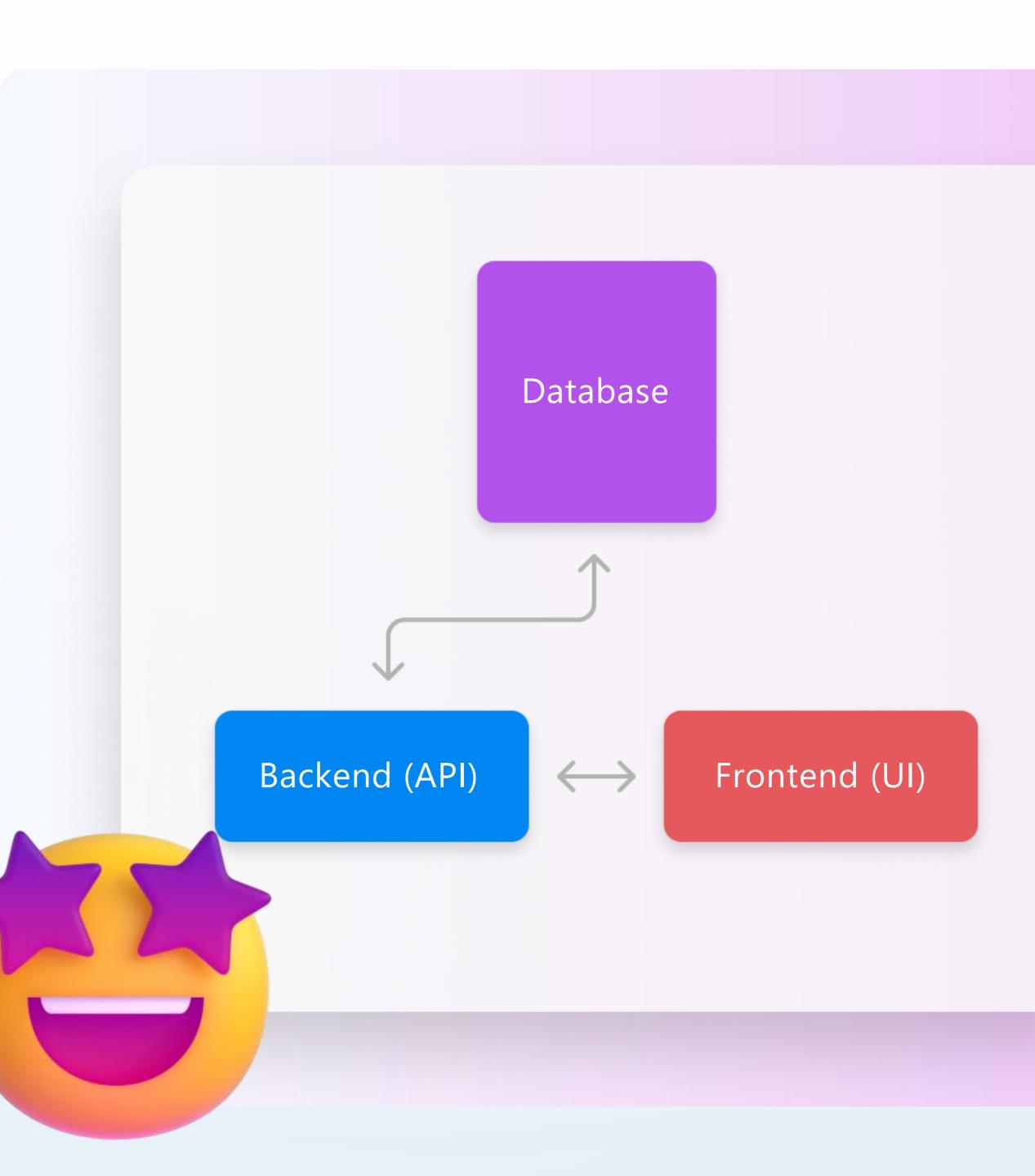


Senior Product Manager @ Microsoft

Currently: Product Lead for the Azure Developer CLI (azd)Previously: Product Manager for Pylance/Python dev experienceBefore that: Software Engineer at startups/consultancies

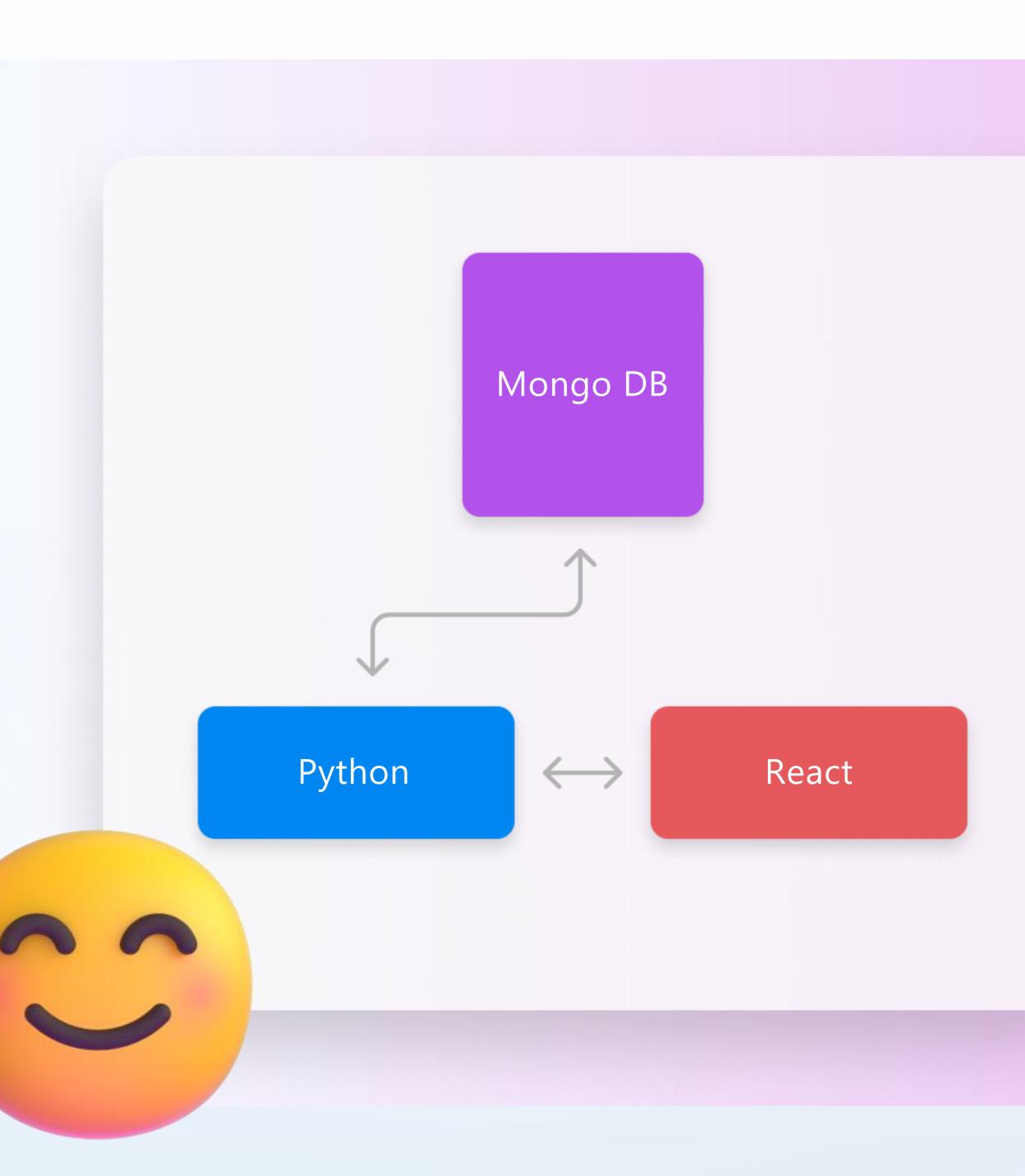


From idea...



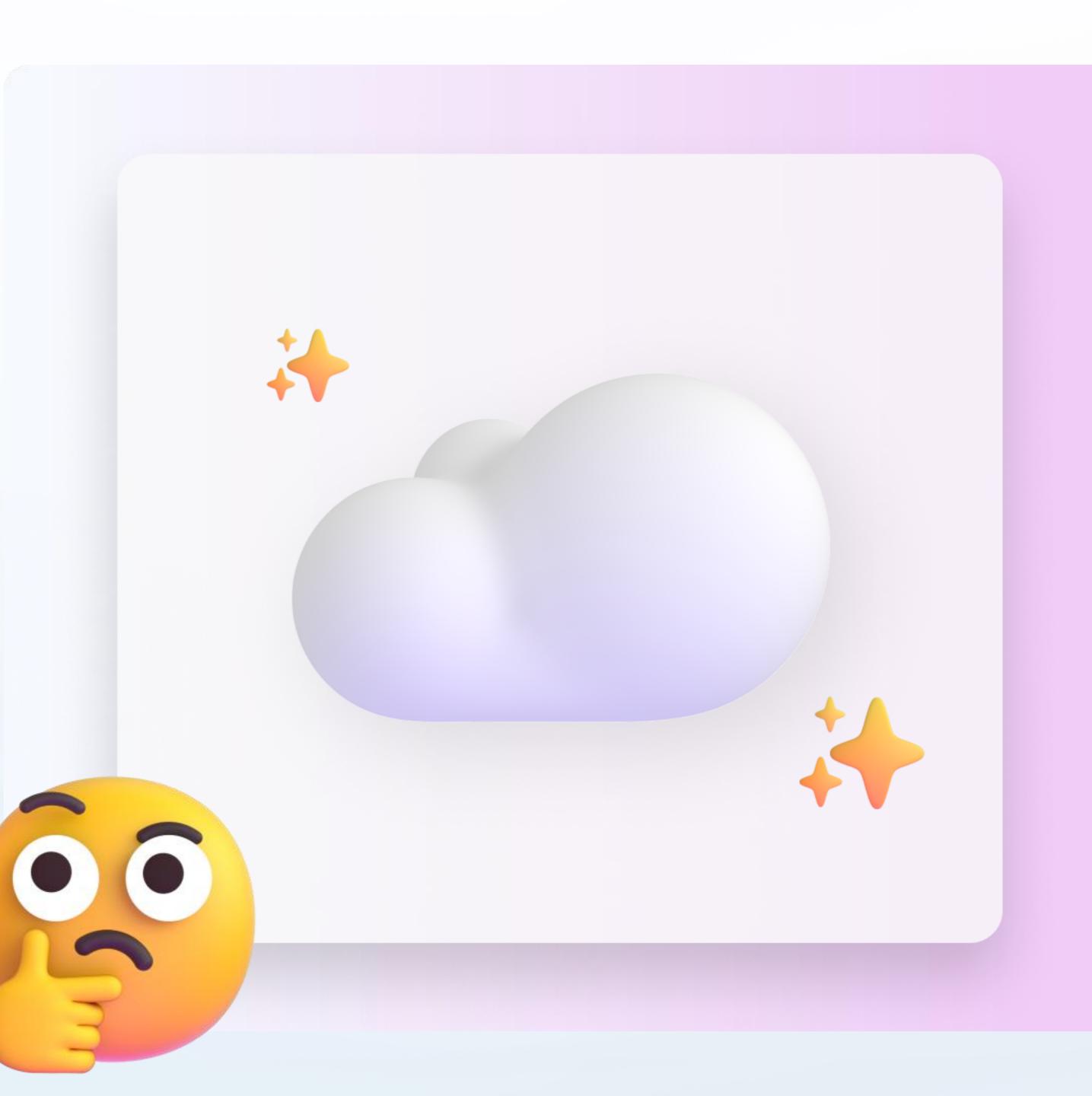


...to local development





...to the cloud???



What does your app look like on Azure?

A flavor of doing things the "right" way

Build — Resources and Considerations

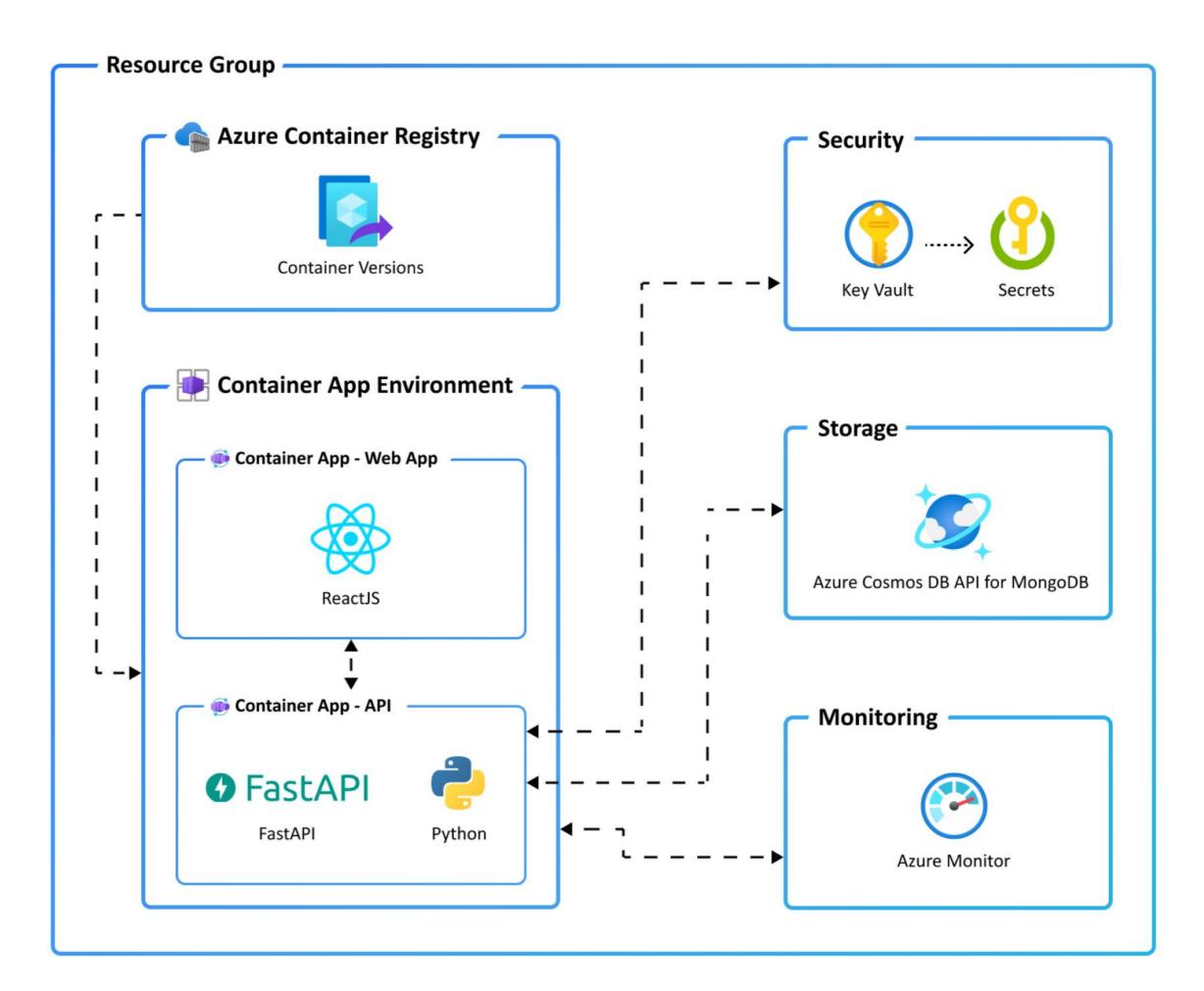
- Container Apps Environment (1)
- Container Registry (1)
- Container App (2)
- Key Vault (1)
- Azure Cosmos DB for MongoDB (1)
- Configuration of infrastructure services
- Configuration of permissions and roles
- Local dev support for working with resources

Monitoring

- Log Analytics Workspace (1)
- Application Insights (1)
- Portal dashboard (1)

Test and Release

• CI/CD pipeline via GitHub Actions





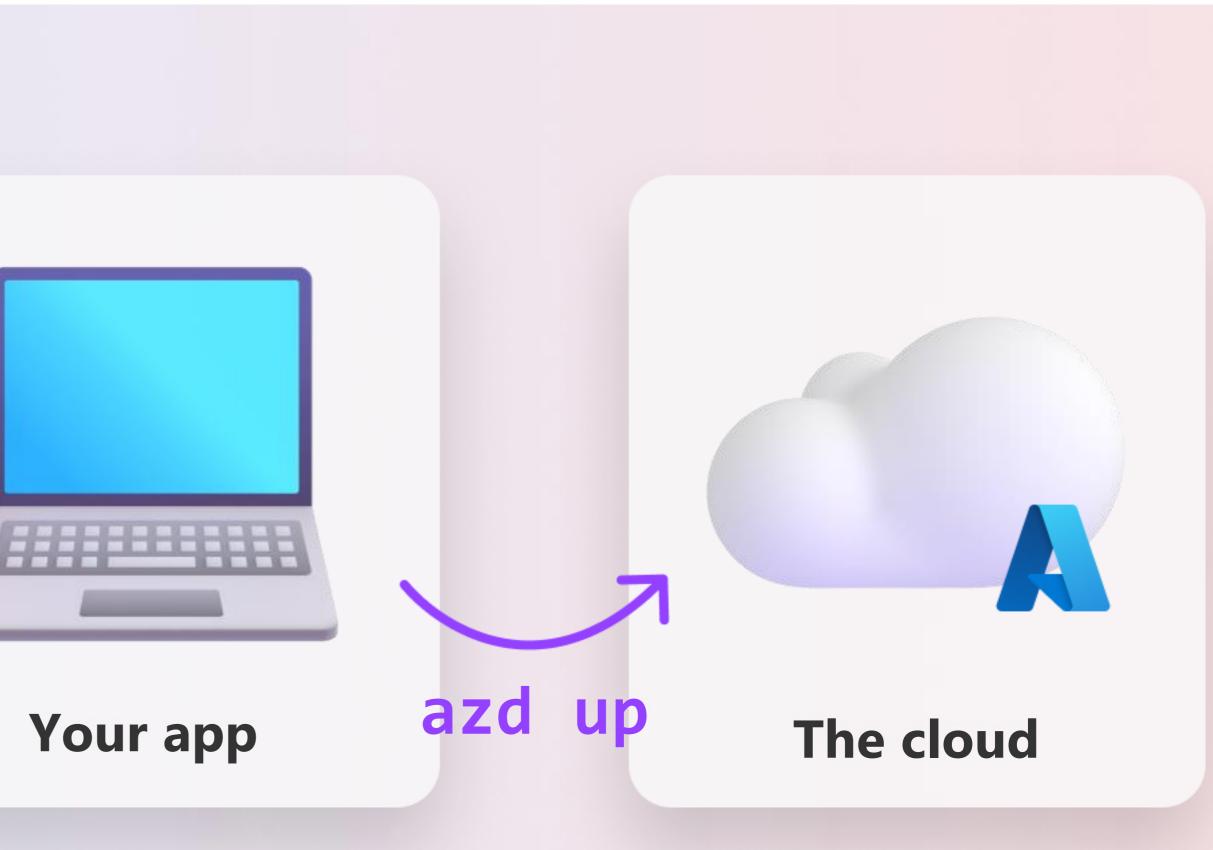
That's a lot to think about and manage!

Do cloud things the right way with the Azure Developer CLI (azd)

From local development environment to the cloud in a single step

azd init
azd up
azd monitor
azd pipeline config

azd commands



Build on application templates infused with best practices

Idiomatic and extensible templates make going code to cloud easy

aka.ms/awesome-azd

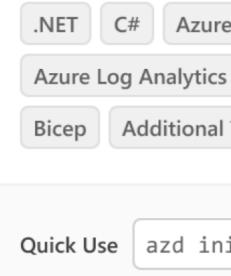
Checkout Awesome azd, a community supported library of azd compatible templates.

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by Azure Dev

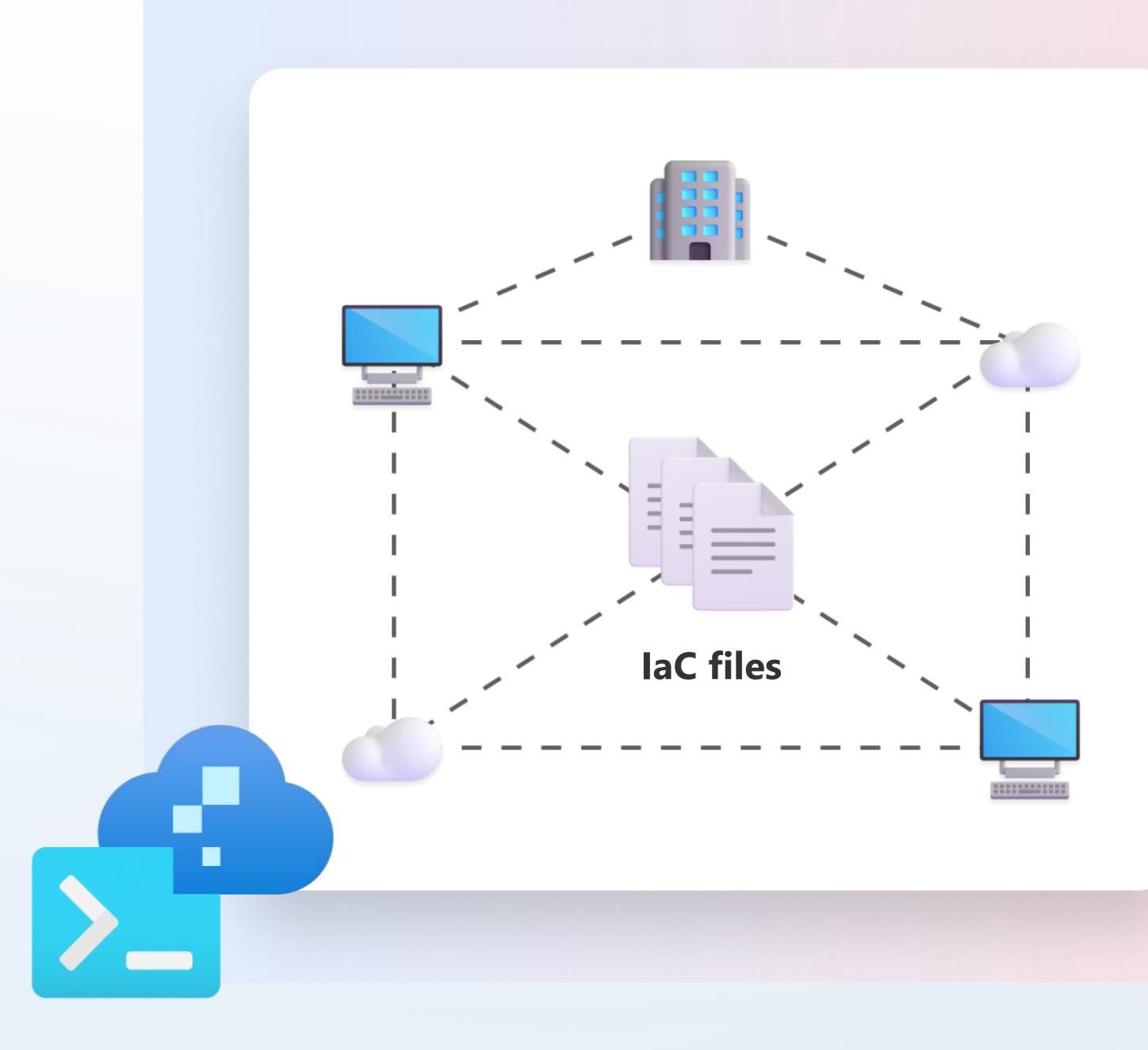
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	A community-contributed templa	plate Library te gallery built to work with the Azure Developer CLI.	
	Search for an azd template Not familiar with th	e Azure Developer CLI (azd)? Learn more	
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w to build an Azure solution	using ete microservice application featuring Dapr	This repository contains a Python Notebook that shows you how easy it is to deploy and use Azure OpenAl along with Azure Cognitive Search, Azure	
/eb application, Java for the A	API, ervice Bus Topics with dead-lettering		See your template here! awesome-azd is looking for new templates!
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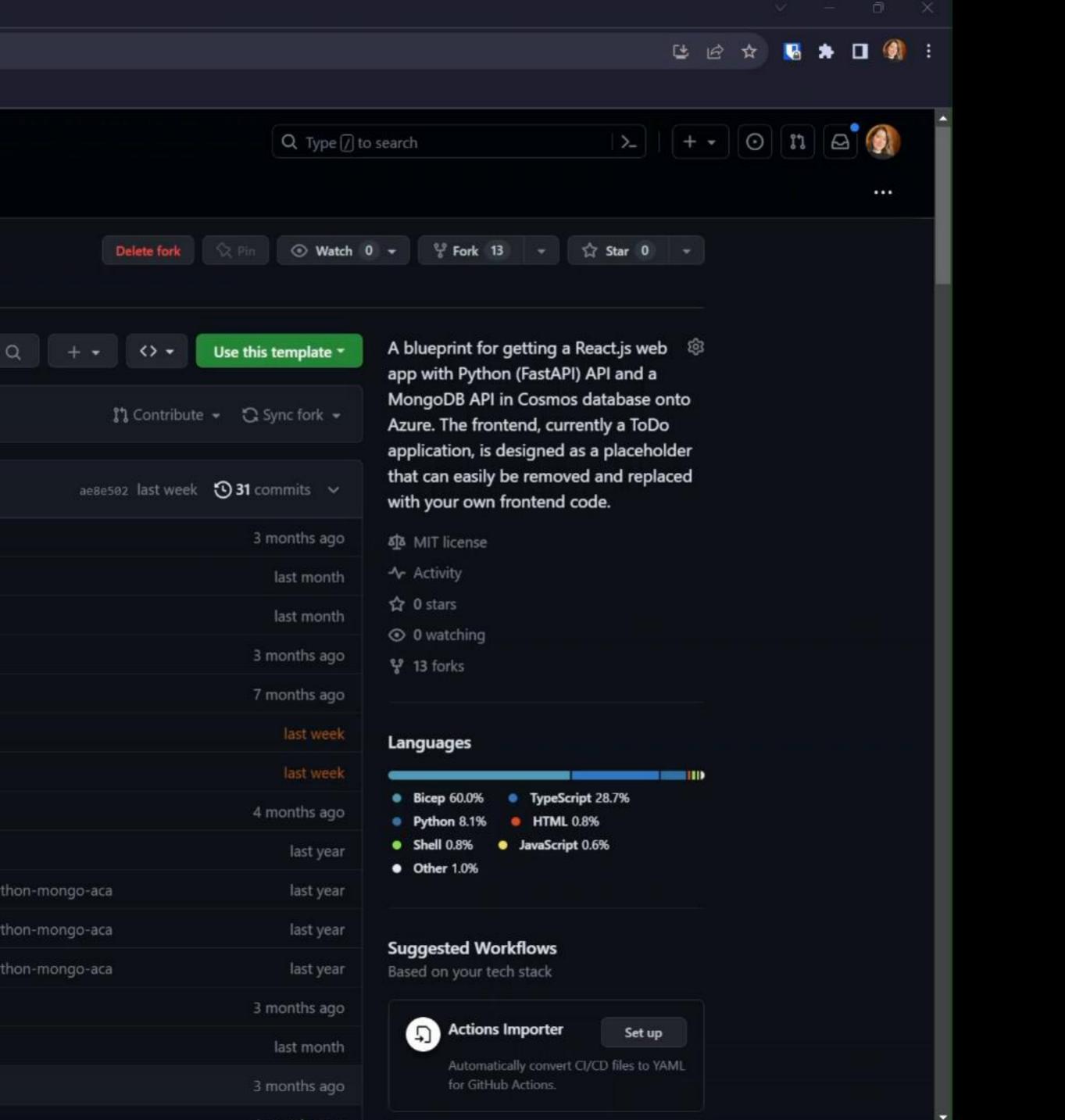
Infrastructure as Codecentric

Use declarative IaC for repeatability and reusability





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-	V TODO-PYTHON-MONGO-ACA [WS	2 workflow_dispatch:
ço	> .azdo	3 push:
	> .azure	4 # Run when commits are pushed to mainline
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Â	 ✓ .github / workflows 	6 branches:
~		7 - main 8 - master
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Ш	> .vscode	10 # GitHub Actions workflow to deploy to Azure
0	> assets	11 # To configure required secrets for connectin
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		28 - name: Checkout
		29 uses: actions/checkout@v3
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		31 - name: Install azd
		32 uses: Azure/setup-azd@v0.1.0 33
		34 - name: Log in with Azure (Federated Cr
		35 if: \${{ env.AZURE_CLIENT_ID != '' }}

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> OUTLINE

> TIMELINE

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branch (main or master) using

using azd ng to Azure, simply run `azd pipeline config`

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Credentials)

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Code to Cloud with Azure Developer CLI



DISCOVER

What do I want to build?

Initialize your own repository or leverage an existing idiomatic template to get started.

Each template includes real app code, local development support, Infrastructure as Code assets, and more!

Find tons of azd compatible templates at: https://azure.github.io/awesome-azd/

\$ azd template list \$ azd init

INFRASTRUCTURE

How do I create & connect services for my application?

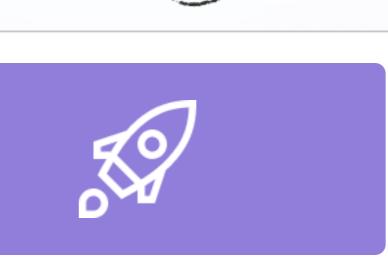
Provision the right resources to run your application on Azure.

Every template includes IaC files written in Bicep or Terraform.

\$ azd provision

All-in-one with azd up!

Package, provision and deploy as a single step with the azd up command!



DEPLOY

How do I get my application running in the cloud?

Package and deploy your application code to Azure in minutes.

\$ azd deploy



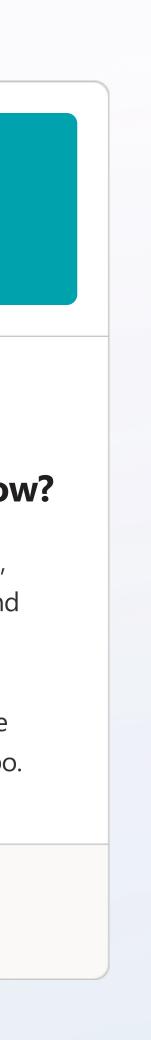
BEST PRACTICES

How do I infuse best practices into my workflow?

Monitor your app's health with usage, performance and reliability metrics and dashboards.

Set up CI/CD to run against real Azure resources on every commit to the repo.

\$ azd monitor \$ azd pipeline config



So maybe I've convinced you that the cloud is cool!

(when you have the right tools to support your workflow)



Ready to get started?

Resources for this talk

github.com/savannahostrowski/pygotham

Azure Developer CLI links

- Install: aka.ms/azd-install
- Docs: aka.ms/azd
- GitHub: github.com/azure/azure-dev
- Community standups: aka.ms/azd-standups
- Template gallery: aka.ms/azd-python-templates

