AZURE BACK TO SCHOOL

I'm speaking at Azure Back to School 2024

What are the latest updates in Azure Bicep 2024?

Fri, 9/6/2024 8:30 am

Elkhan Yusubov

sessionize

Elkhan Yusubov
Speaker | Author | Cloud Architect
Founder at #cloudmarathoner

Microsoft® Most Valuable Professional

Microsoft MCT Regional Lead

@ElYusubov

Elkhan is a Cloud Architect Manager, Microsoft Azure MVP and 16+ MCT with experience in cloud solutions, enterprise healthcare systems and healthcare data, and API standards (HL7 FHIR, EDI X12).

He is an active Microsoft Tech Community Contributor, Cloud Lunch and Learn Speaker and Co-Organizer, and LinkedIn instructor with interests in Architecture, DevOps & Security.

He is a frequent speaker at tech meetups and has volunteered for Give Camps, Azure Data Fest, SQL Saturdays and Microsoft community events, like this one.

And please, checkout his blog posts at Cloud Marathoner site below.

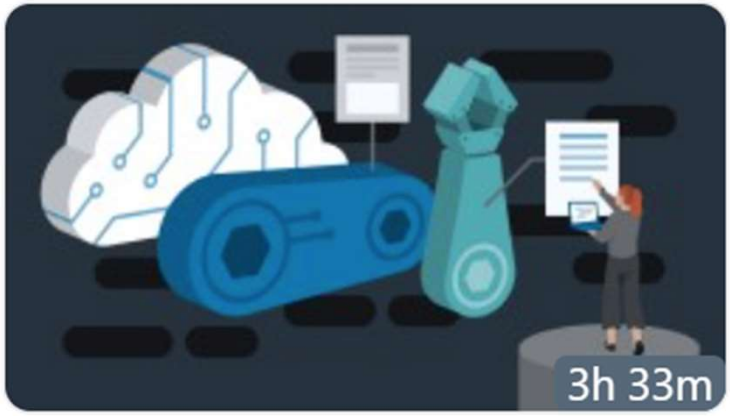
https://theCloudMarathoner.com ⛅🏃‍♂️🏃‍♀️

Bicep courses on LinkedIn

Azure Bicep First Look 📽

Building IaC with 💪 Part 1 📽

Building IaC with 💪 Part 2 📽



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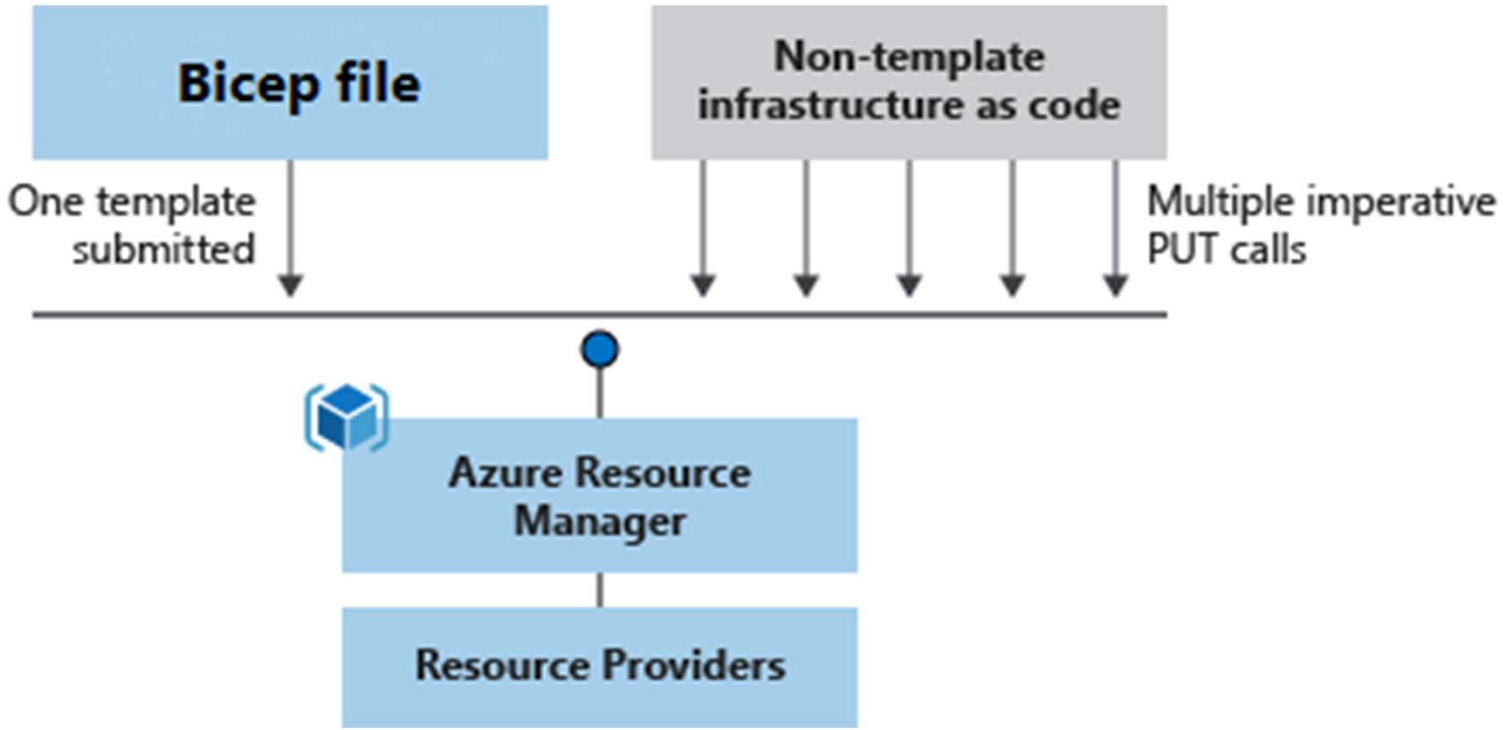
What we will cover

1. Express intro in Azure Bicep
2. Latest on Azure Bicep
3. Next releases on Bicep
4. What to expect in near future?
5. Demos

What is Azure Bicep?

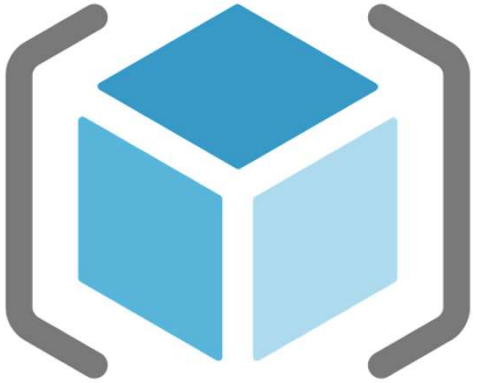
- Domain Specific Language (DSL)
- Authoring and managing Azure resources
- Transparent abstraction over ARM
- IaC for Microsoft Azure

Relationship between Azure Bicep and ARM



Bicep language benefits

- Easy to understand and maintain
- Day Zero support
- Transparent abstraction
- Awesome tooling in VS Code
- Clean code syntax
- Code re-use and modularity
- Deep integration with Azure
- Preflight validation
- No state management
- Production support



How to start & Azure Bicep resources?

README.md

AWESOME Azure Bicep 💪

awesome | Markdown Link Checker passing

A curated list of AWESOME blogs, videos, tips-and-tricks, codes, tools, scripts... Hand-picked tips and tricks to help you learn Azure Bicep and get you ready to start deploying Azure resources to your favorite environment(s).

> Community contributions are very welcome! Check out the contribution guide and submit a **Pull Request** with your adds/removes/changes to the content!

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Readme
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1 watching
11 forks

Releases

No releases published
Create a new release

Packages

No packages published
Publish your first package

Contributors 4

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Azure Bicep evolution from 2020

- Started as alpha version in 2020
- Supported version: v0.3.1
- Latest version: v0.29.47
- Expected version v1.0 TBD ☺

```
PS C:\Work\Learn-Bicep> az bicep list-versions
[
  "v0.8.9",
  "v0.8.2",
  "v0.7.4",
  "v0.6.18",
  "v0.6.11",
  "v0.6.1",
  "v0.5.6",
  "v0.4.1318",
  "v0.4.1272",
  "v0.4.1124",
  "v0.4.1008",
  "v0.4.613",
  "v0.4.451",
  "v0.4.412",
  "v0.4.63",
  "v0.4.1",
  "v0.3.539",
  "v0.3.255",
  "v0.3.126",
  "v0.3.1",
  "v0.2.328",
  "v0.2.317",
  "v0.2.212",
  "v0.2.59",
  "v0.2.14",
  "v0.2.3",
  "v0.1.226-alpha",
  "v0.1.223-alpha",
  "v0.1.37-alpha",
  "v0.1.1-alpha"
```

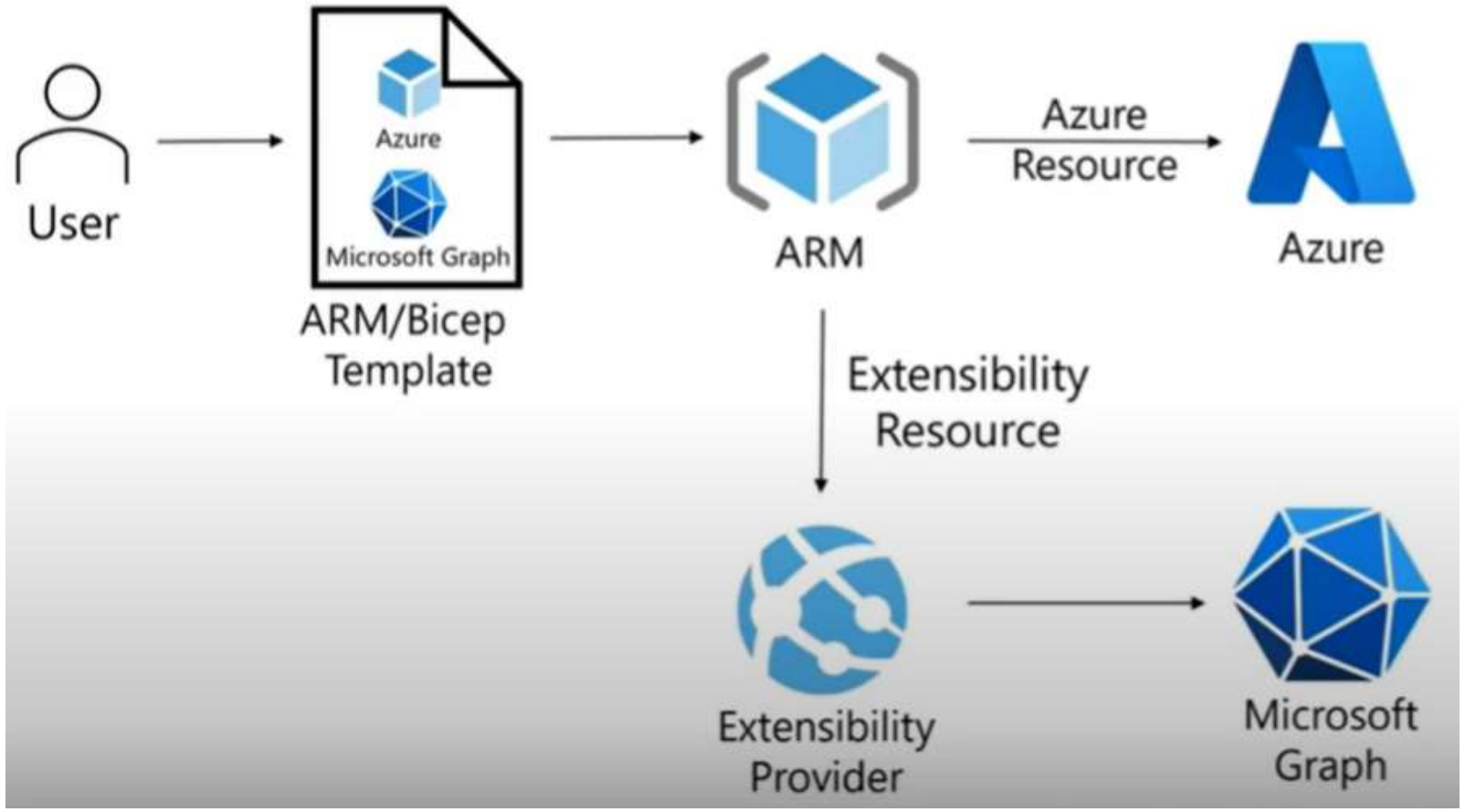
Recent Azure Bicep Releases

- Compile-time imports
- User Defined Functions
- Allow function imports in .bicepparam files
- Default levels for linting rules finalized
- MS Graph Extensibility is now in Public Preview!
- Breaking changes: replace “provider” with “extension”
- Export as Bicep – coming in next few weeks

Upcoming Bicep Releases

- Local Deploy – v0.31
- More MS Learn Paths – v.*
- Pass resources between modules - v.*
- Private registry completions - v.*
- Dynamic type Updates - v.*
- Bicep Deploy - v.*

Enabling Graph APIs with Bicep



Graph Bicep Extension with dynamic types

Example bicepconfig.json

```
{
  "experimentalFeaturesEnabled": {
    "extensibility": true,
    "extensionRegistry": true
  },
  "extensions": {
    "microsoftGraphBeta":
"br:mcr.microsoft.com/bicep/extensions/microsoftgra
ph/beta:0.1.0-preview",
    "microsoftGraphV10":
"br:mcr.microsoft.com/bicep/extensions/microsoftgra
ph/v1:0.2.0"
  }
}
```

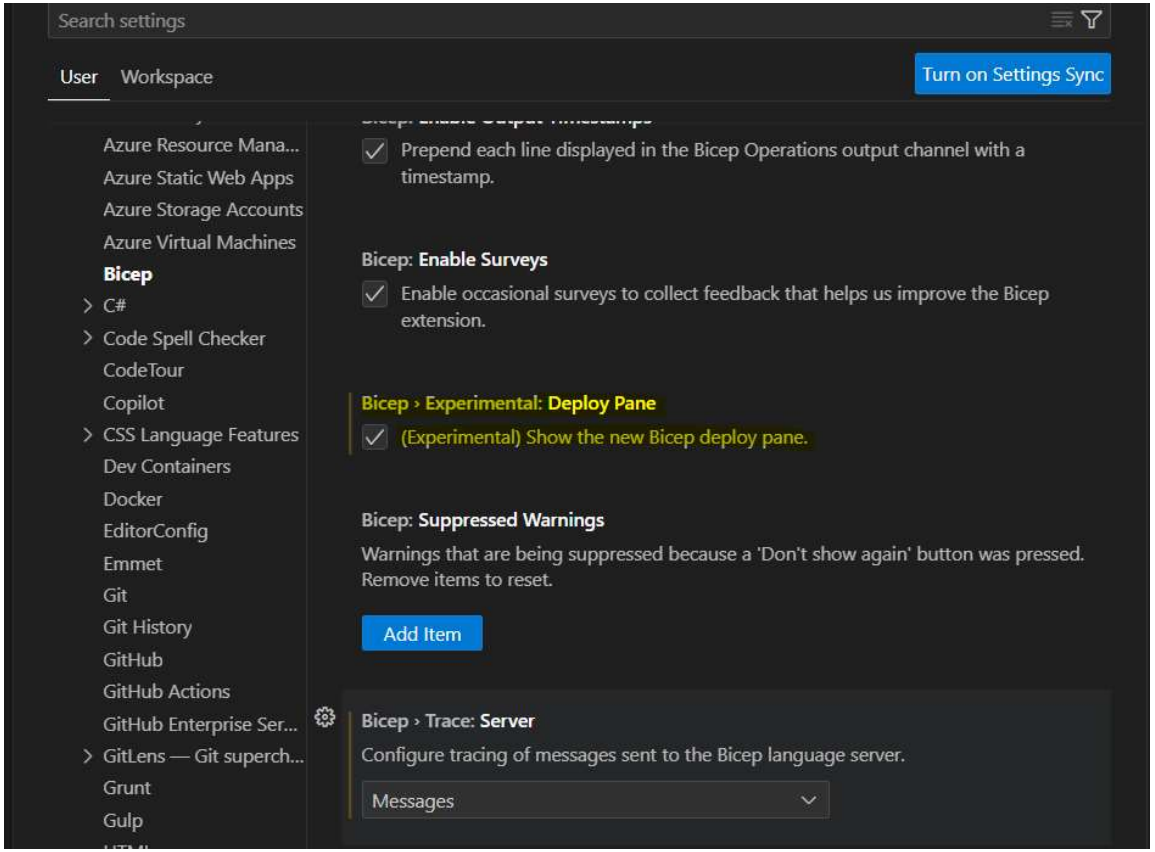
Example main.bicep

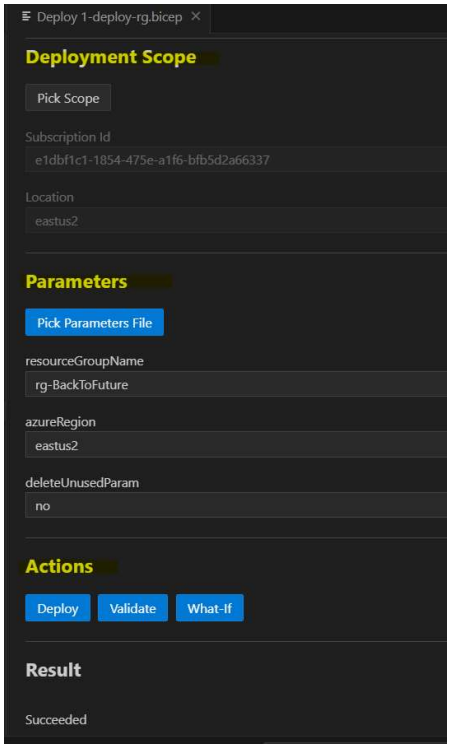
```
extension microsoftGraphBeta
extension microsoftGraphV10

resource testApp
'Microsoft.Graph/applications@beta' = {
  displayName: 'app displayname'
  uniqueName: 'myTestApp'
}

resource testGroup
'Microsoft.Graph/groups@v1.0' = {
  displayName: 'group displayname'
  mailEnabled: false
  mailNickname: 'groupMailNickname'
  securityEnabled: true
  uniqueName: 'myTestGroup'
}
```

VS Code Experimental & Deployment Pane





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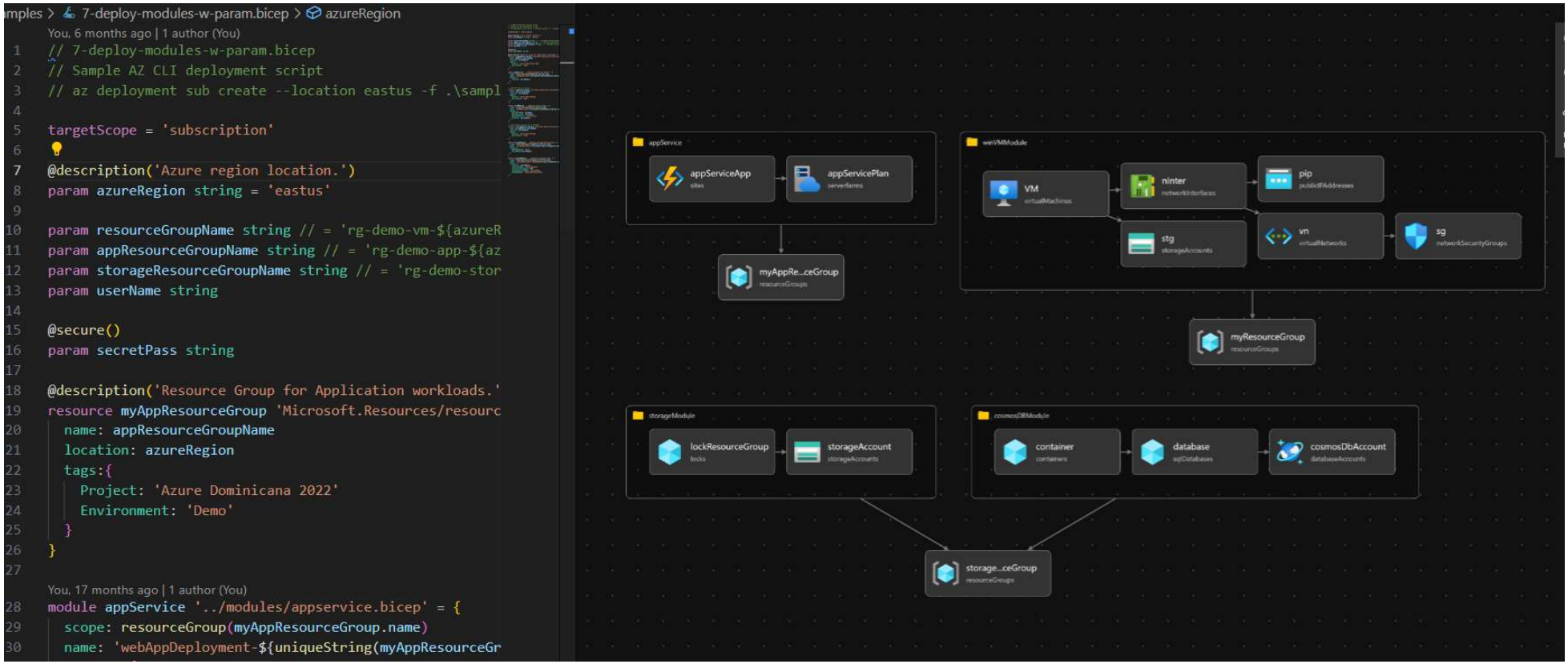
Visualizer v2



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Azure Bicep First Look 🐿

Building IaC with 💪 Part 1 🐿

Continue with 💪 Part 2 🐿

Bicep Project - GitHub

AWESOME 💪 - GitHub

Thank you !

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Founder at #cloudmarathoner

https://azurebacktoschool.github.io

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