David Strube - dstrube3@gatech.edu CS 6440 - Intro to Health Informatics Lab 4.2 - 2021-03-29

# A High-Level description of Azure

### What it is:

Azure is Microsoft's cloud computing platform, and a set of cloud computing products and services. Azure has a long list of cloud computing products and services in many categories. Listing all of the products and services would be too lengthy for the purpose of this tutorial, so instead I will just list the categories of products and services (Microsoft Azure, 2021a):

- AI + Machine Learning
- Analytics
- Blockchain
- Compute
- Containers
- Databases
- Developer Tools
- DevOps
- Hybrid + Multicloud
- Identity
- Integration
- Internet of Things
- Management and Governance
- Media
- Migration
- Mixed Reality
- Mobile
- Networking
- Security
- Storage
- Web
- Windows Virtual Desktop

### Basic use cases

### Some basic use case of Azure are:

- 1. As a web developer, I want to create a blog (Microsoft Docs, 2021a)
- 2. As a database engineer, I want to explore Azure's database products and analytics services (Microsoft Docs, 2021b)
- 3. As a student working towards his Master's Degree in Computer Science, specializing in Interactive Intelligence, I want to explore Azure's AI services (Microsoft Docs, 2021c)

# How to spin up an instance of Azure

See use case #1 above.

### A small JavaScript app using the Azure Tutorial

https://youtu.be/mo9sNor8N50 (Microsoft Docs, 2020a)

# How to deploy Azure API for FHIR

See youtube link above.

## How Azure could be utilized in this course

Azure could be utilized in this course for any assignment that requires a cloud deployment or has substantial processing power needs. Since Health Informatics often deals with online services and/or large amounts of data, this could be applied to just about every major assignment in this course.

### A relevant course project or lab that would encompass two or more of the Azure tools

An example project that could use a couple Azure tools would be the practicum that my team and I are working on. We are working on Project #4 from the list of External & TA Mentor Projects (post #370 on Ed), MedCardsWeb Mobile Application. For the frontend of this project, we are using the Azure Mobile product Xamarin (Microsoft Azure, 2021b). For the backed, one of the technologies we might be using is the Azure API for FHIR (Microsoft Docs, 2020b) - this is still being decided.

### References

- Directory of Azure Cloud Services: Microsoft Azure. (2021a). Directory of Azure Cloud Services | Microsoft Azure. <a href="https://azure.microsoft.com/en-us/services/">https://azure.microsoft.com/en-us/services/</a>. Accessed March 28, 2021.
- Exercise Create a website hosted in Azure: Microsoft Docs. (2021a). Exercise Create a website hosted in Azure | Microsoft Docs.
   <a href="https://docs.microsoft.com/en-us/learn/modules/azure-architecture-fundamentals/exercise-create-website">https://docs.microsoft.com/en-us/learn/modules/azure-architecture-fundamentals/exercise-create-website</a>. Accessed March 28, 2021.
- Explore Azure database and analytics services: Microsoft Docs. (2021b). Explore Azure database and analytics services | Microsoft Docs.
   https://docs.microsoft.com/en-us/learn/modules/azure-database-fundamentals/.
   Accessed March 28, 2021.
- Choose the best AI service for your needs: Microsoft Docs. (2021c). Choose the best AI service for your needs | Microsoft Docs.
   https://docs.microsoft.com/en-us/learn/modules/ai-machine-learning-fundamentals/.
   Accessed March 28, 2021.
- 5. Deploy JavaScript app to read data from FHIR service: Microsoft Docs. (2020a). Deploy JavaScript app to read data from FHIR service | Microsoft Docs. <a href="https://docs.microsoft.com/en-us/azure/healthcare-apis/fhir/tutorial-web-app-fhir-serve">https://docs.microsoft.com/en-us/azure/healthcare-apis/fhir/tutorial-web-app-fhir-serve</a> r. Accessed March 28, 2021.
- 6. Xamarin with Azure: Microsoft Azure. (2021b). Xamarin with Azure | Microsoft Azure. <a href="https://azure.microsoft.com/en-us/features/xamarin/">https://azure.microsoft.com/en-us/features/xamarin/</a>. Accessed March 28, 2021.
- 7. Quickstart: Deploy Azure API for FHIR using Azure portal: Microsoft Docs. (2020b). Quickstart: Deploy Azure API for FHIR using Azure portal | Microsoft Docs. <a href="https://docs.microsoft.com/en-us/azure/healthcare-apis/fhir/fhir-paas-portal-quickstart">https://docs.microsoft.com/en-us/azure/healthcare-apis/fhir/fhir-paas-portal-quickstart</a>. Accessed March 28, 2021.