



MS Analytics
MAYS BUSINESS SCHOOL

Git & Cloud Deployment

Spring 2020 – Week 5

Outline

- **git**
 - git Commands
 - GitHub Desktop
- **Azure Services**
 - Azure DevOps
 - Azure CLI
 - Azure Container Registry
 - Azure Container Instance
 - Azure Kubernetes Services
 - Azure App Services
 - Azure Functions
 - Azure Databricks
 - Azure ML



git

- Git is a Version Control System (VCS)
- Used to track changes, versioning, in computer files/code in repositories
- Assist in the coordination of joint program work by multiple collaborators
- Branching and merging
- It was developed by Linus Torvalds (creator of Linux kernel)
- <https://git-scm.com/>

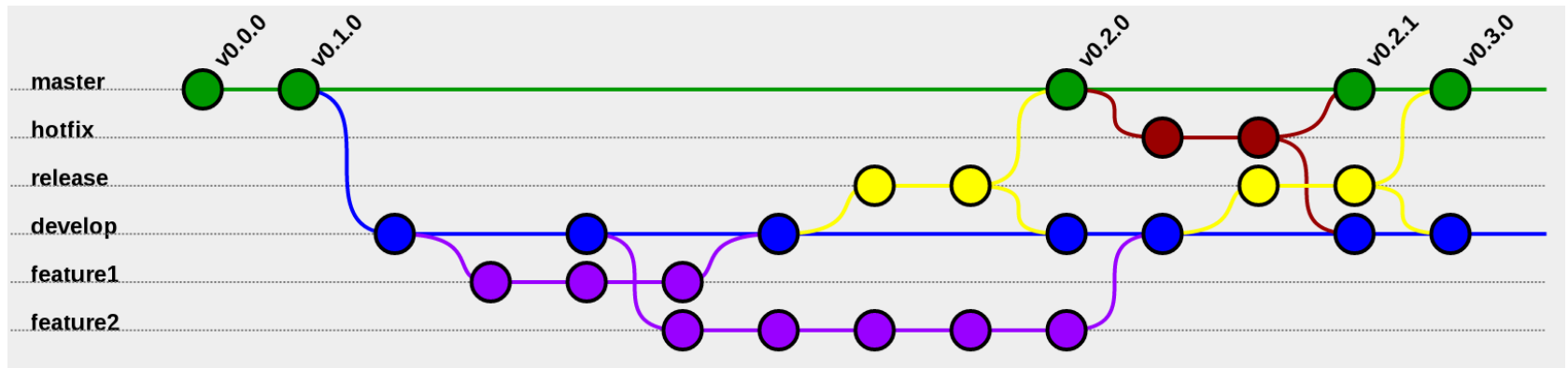


git Commands

- ***git clone*** – creates a local copy of a repository and syncs between local and remote
- ***git init*** - initializes an existing directory as a git repository
- ***git add*** – adds a file or all files in a directory to stage for next commit
- ***git commit*** – commits all staged changes as a new snapshot
- ***git pull*** – fetch and merge any commits from the remote branch
- ***git push*** – sends all local branches commits to the remote repo
- ***git branch*** – lists all of your branches for repo or creates a branch



git branch



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<https://www.atlassian.com/git/tutorials/comparing-workflows/gitflow-workflow>

GitHub

- GitHub is web-based service for hosting VCSs based on git
- Both private repositories and free accounts (public) are available on GitHub
- <http://www.github.com>



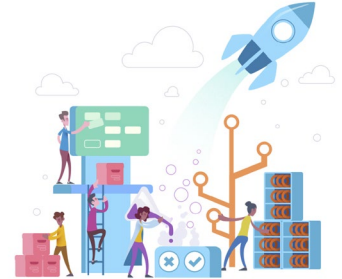
GitHub Desktop

- Desktop client to simply git
- <https://desktop.github.com/>



Azure DevOps and VS Code

- **Modern Dev Services in Azure**
- <https://dev.azure.com>



Azure Boards

Deliver value to your users faster using proven agile tools to plan, track, and discuss work across your teams.



Azure Test Plans

Test and ship with confidence using manual and exploratory testing tools.



Azure Pipelines

Build, test, and deploy with CI/CD that works with any language, platform, and cloud. Connect to GitHub or any other Git provider and deploy continuously.



Azure Artifacts

Create, host, and share packages with your team, and add artifacts to your CI/CD pipelines with a single click.



Azure Repos

Get unlimited, cloud-hosted private Git repos and collaborate to build better code with pull requests and advanced file management.

Extensions Marketplace

Access extensions from Slack to SonarCloud to 1,000 other apps and services—built by the community.

Azure CLI

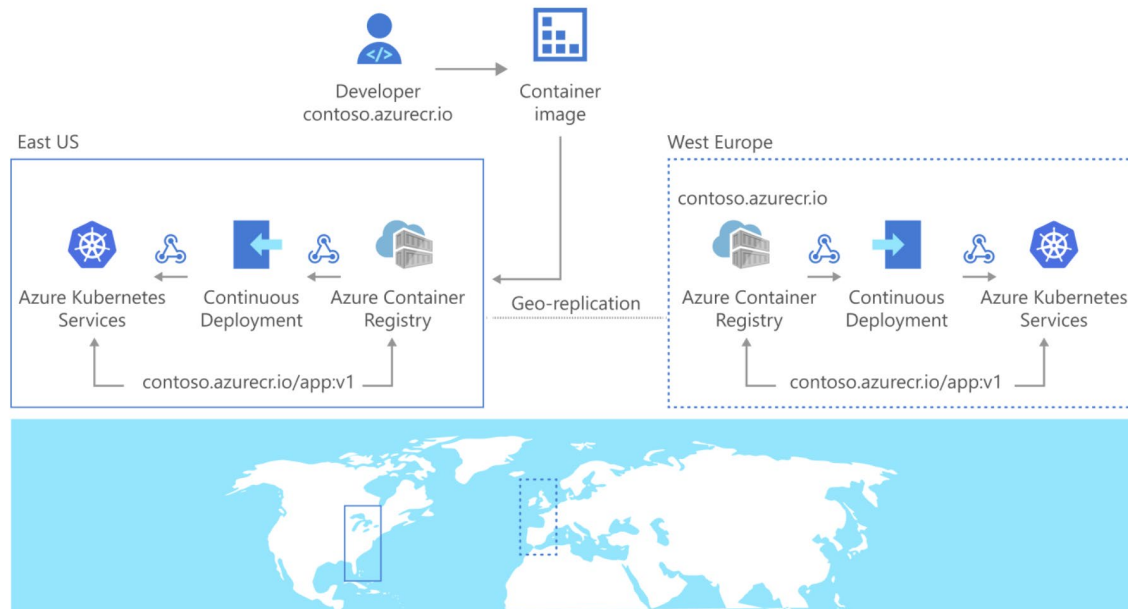
Command-line tool for managing Azure resources

<https://docs.microsoft.com/en-us/cli/azure/?view=azure-cli-latest>



Azure Container Registry

- Build, store, secure, scan, replicate, and manage container images and artifacts
- Fully managed, geo-replicated instance of [OCI distribution](https://oci.distribution.io).
- <https://azure.microsoft.com/en-us/services/container-registry/>



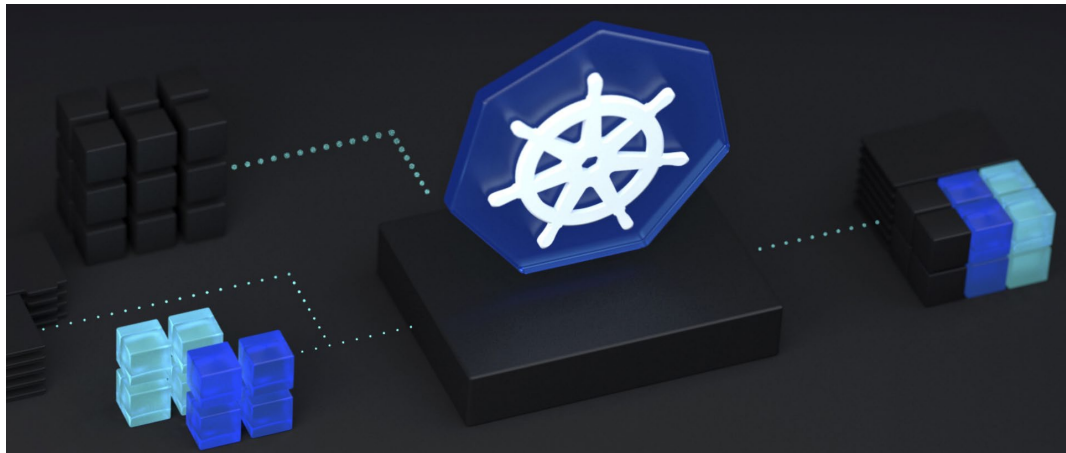
Azure Container Instance

- **Run Containers on Azure without Managing Servers**
- <https://azure.microsoft.com/en-us/services/container-instances/>
- <https://docs.microsoft.com/en-us/azure/container-instances/container-instances-quickstart>



Azure Kubernetes Services

- **Hosted Kubernetes environment**
- Quick and easy to deploy and manage containerized applications
- No container orchestration expertise needed!
- <https://azure.microsoft.com/en-us/resources/kubernetes-up-and-running/>
- <https://docs.microsoft.com/en-us/azure/aks/>



Azure App Services

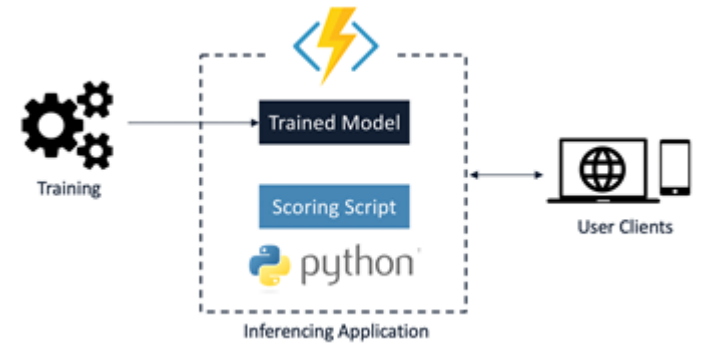
Web Apps on a Fully Managed Platform

<https://azure.microsoft.com/en-us/services/app-service/>



Azure Functions

Serverless Compute Platform

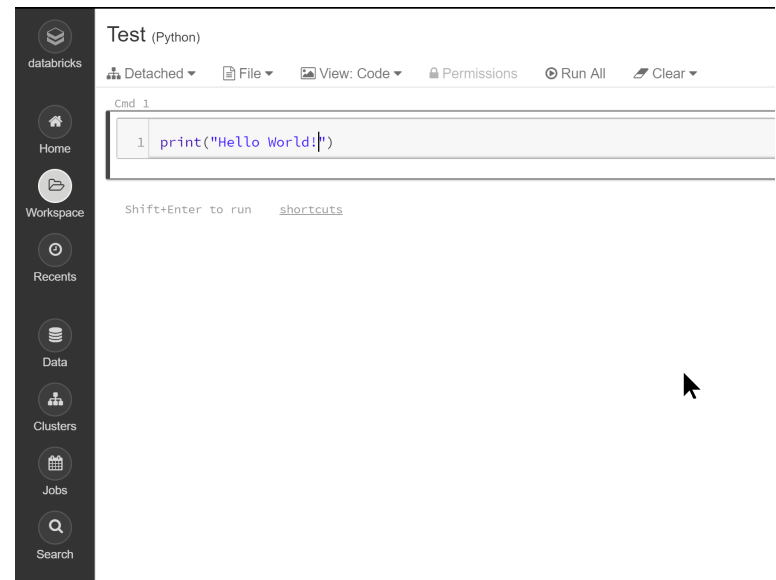
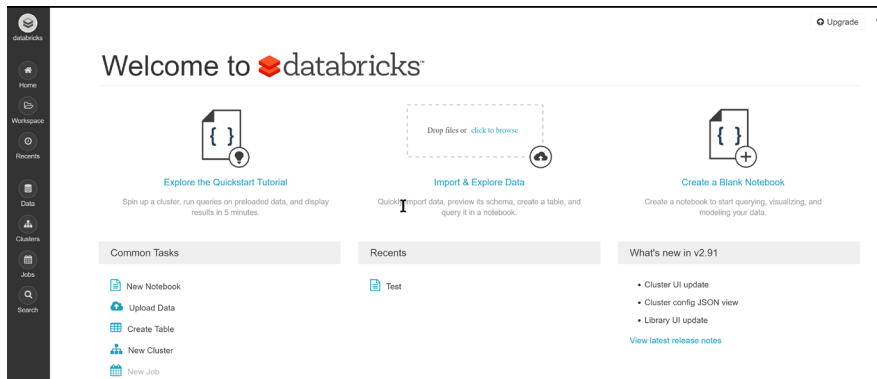


<https://azure.microsoft.com/en-us/services/functions/>

<https://azure.microsoft.com/en-us/blog/announcing-the-general-availability-of-python-support-in-azure-functions/>

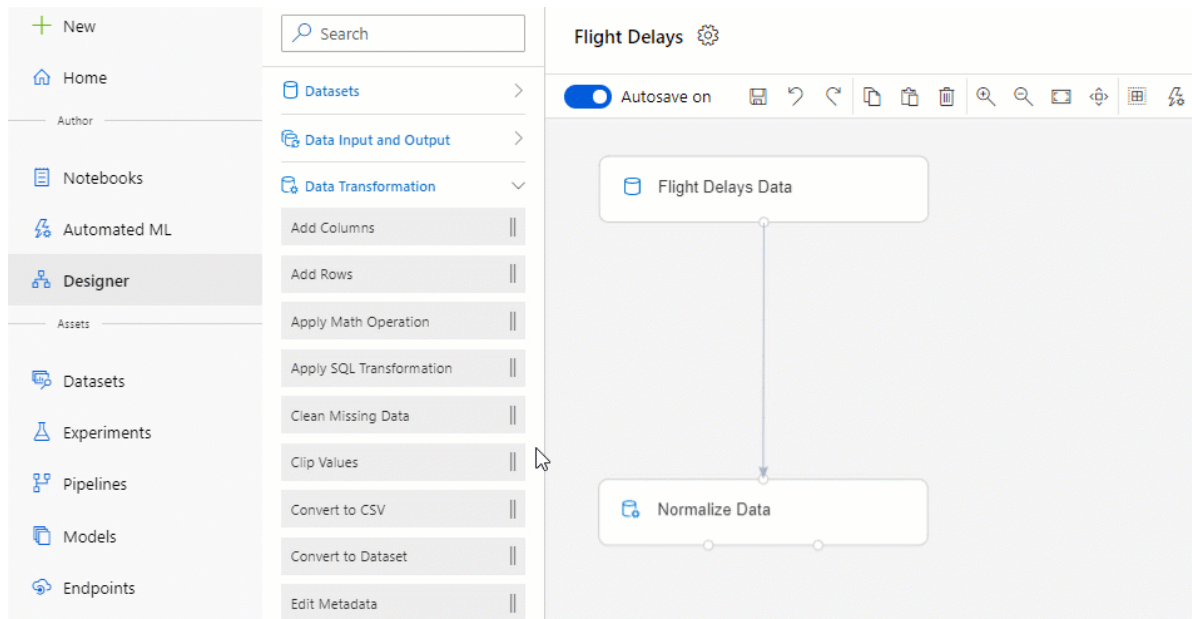
Azure Databricks

Workbooks



Azure ML

- **Build Enterprise Grade models quickly in Azure**
- Cloud-based environment
- Use to train, deploy, automate, manage, and track ML models
- <https://docs.microsoft.com/en-us/azure/machine-learning/overview-what-is-azure-ml>



Michael Davidson

MS Analytics Class of 2016



Roland H. Acra '86 – MS in Analytics Award



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**Thank
you for
listening!**

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