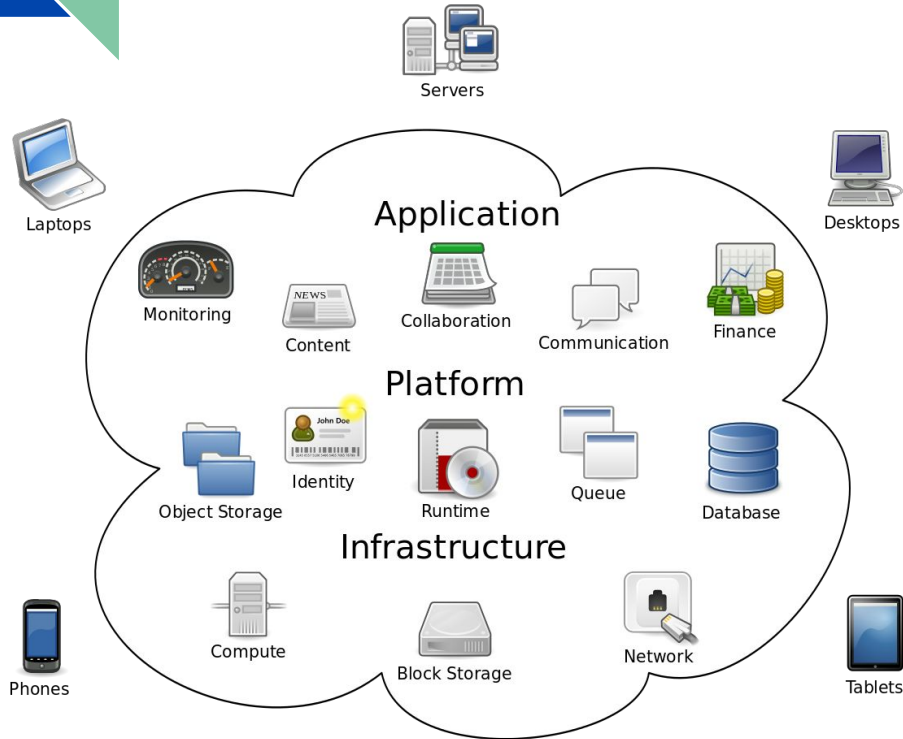




# Intro to Cloud Computing and Machine Learning

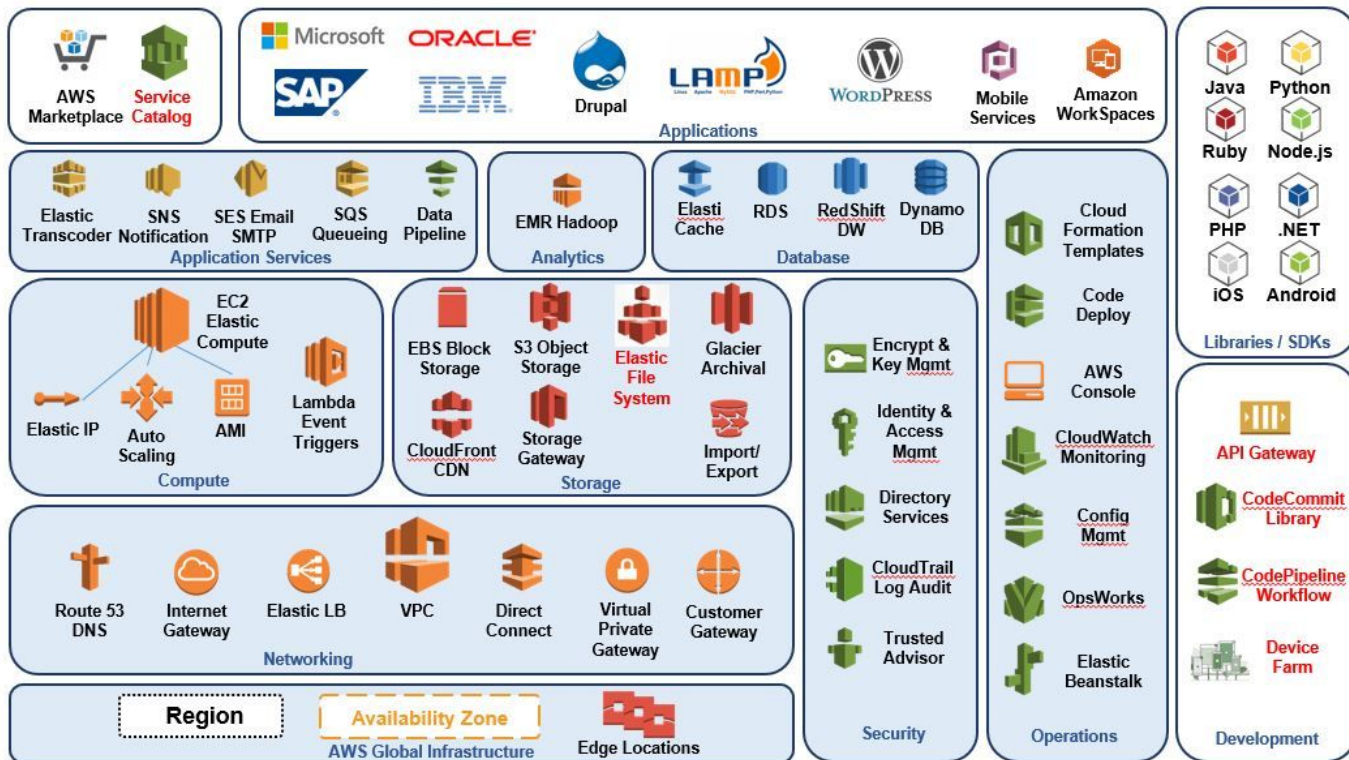
TEAM JSA: Jingchao Zhou & Simran Regmi

# What is Cloud Computing?



on-demand delivery of  
computing services, such as  
servers, databases,  
intelligence, over the  
Internet

# Amazon Web Services





# Google Cloud Platform



Compute



Storage & Database



Networking



Big Data



Developer Tools



Identity & Security



Internet of Things



Cloud AI



Management Tools



Data Transfer

# Microsoft Azure

## Developer Services



Visual Studio Team Services



Azure DevTest Labs\*



VS Application Insights\*



HockeyApp



Developer Tools

## Management & Security



Azure Portal



Scheduler



Automation



Log Analytics



Key Vault



Security Center\*

### Compute



Virtual Machines



Virtual Machine Scale Sets



Cloud Services



Batch



RemoteApp



Service Fabric



Azure Container Service

### Web & Mobile



Web Apps



Mobile Apps



Logic Apps\*



API Apps



API Management



Notification Hubs



Mobile Engagement



Functions\*

### Data & Storage



SQL Database



DocumentDB



Redis Cache



Storage: Blobs, Tables, Queues, Files and Disks



StorSimple



Search



SQL Data Warehouse\*



SQL Server Stretch Database\*

### Analytics



Data Lake Analytics\*



Data Lake Store\*



HDInsight



Machine Learning



Stream Analytics



Data Factory



Data Catalog



Power BI Embedded\*

### Internet of Things & Intelligence



Azure IoT Suite



Azure IoT Hub



Event Hubs



Cortana Intelligence Suite



Cognitive Services\*

### Media & CDN



Media Services



Content Delivery Network

### Identity & Access Management



Azure Active Directory



B2C\*



Domain Services\*



Multi-Factor Authentication



# Advantages of Cloud Platforms

- The cloud's pay-per-use model is good for bursty AI or machine learning workloads
- The cloud makes it easy for enterprises to experiment with machine learning capabilities and scale up as projects go into production and demand increases
- The cloud makes intelligent capabilities accessible without requiring advanced skills in artificial intelligence or data science
- AWS, Microsoft Azure, and Google Cloud Platform offer many machine learning options that don't require deep knowledge of AI, machine learning theory, or a team of data scientists

# Tools and Commands



**Amazon  
SageMaker**

a fully managed machine learning service that allows oneself to build and train machine learning models



**amazon** Rekognition

a cv software that allows one to identify a person in a photo or video using private repositories of face images



**amazon  
S3**

a data storage service that has the capability to store the dataset that powers our model training process

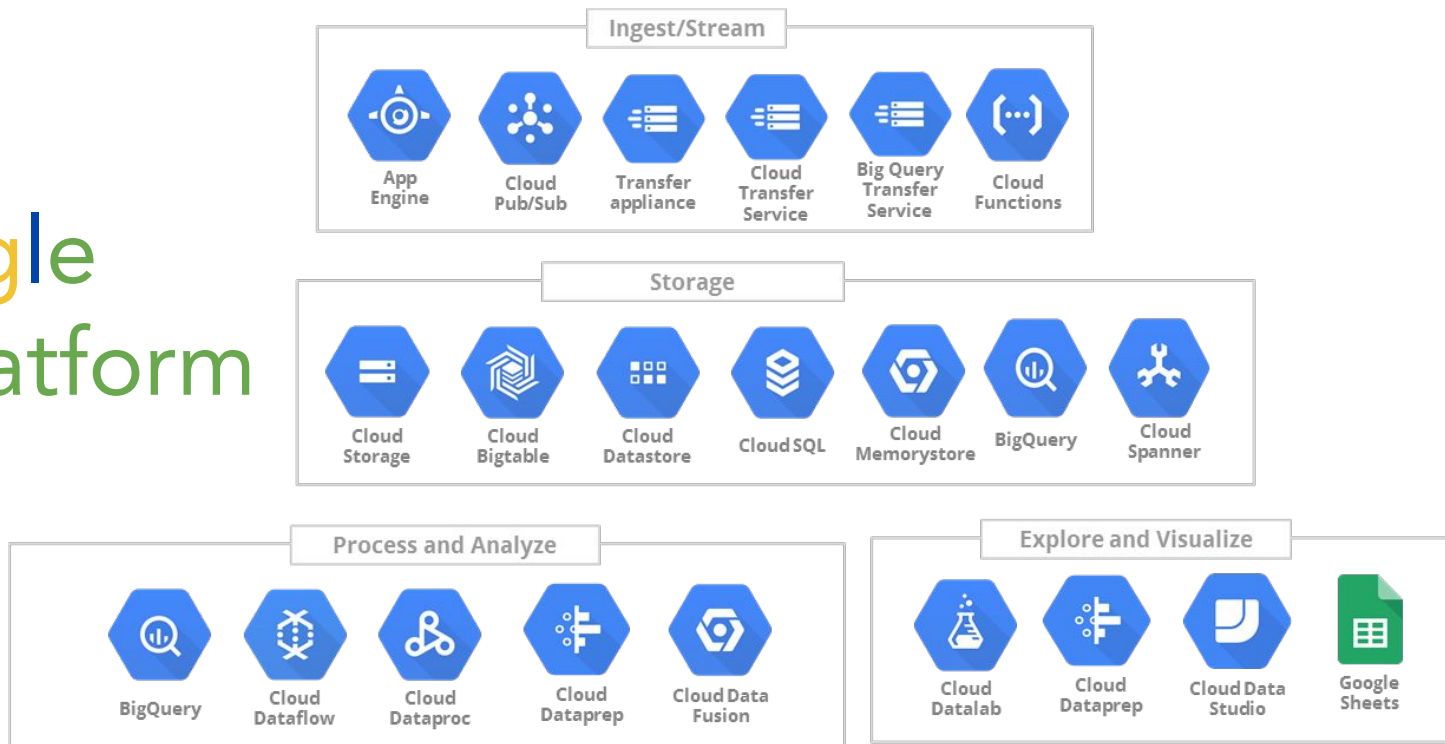


**amazon  
EMR**

a big data tool that processes vast amounts of data using open source tools such as Apache Spark

# Introduction to ML Workflows

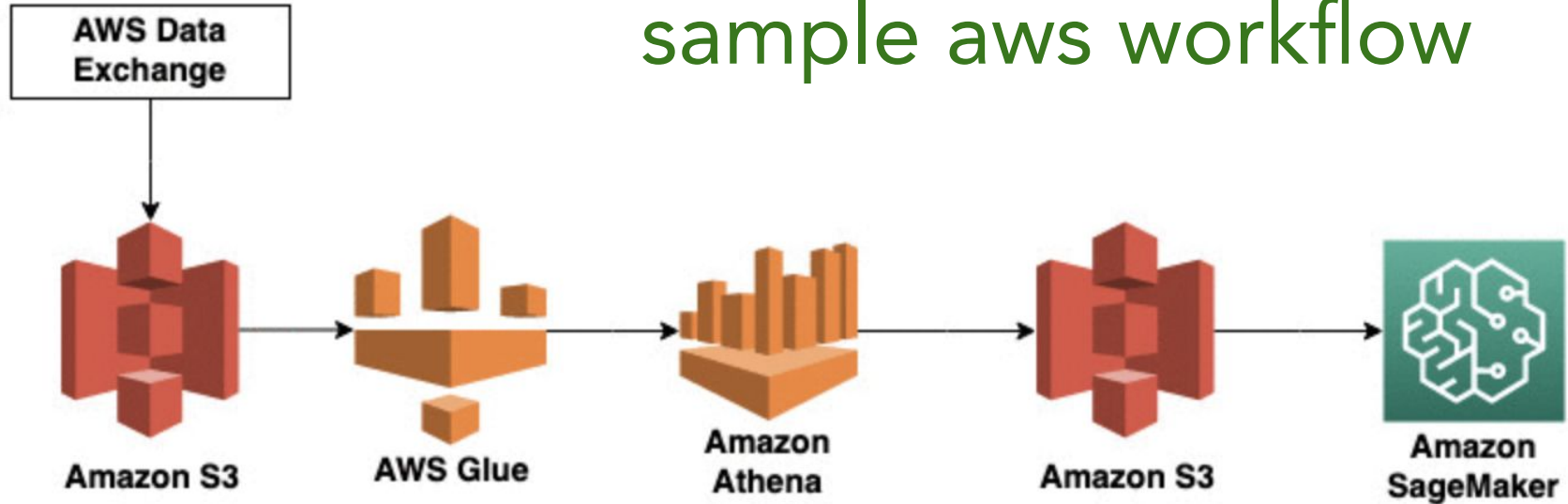
google  
cloud platform





# Introduction to ML Workflows

sample aws workflow



# Introduction to ML Workflows

sample microsoft azure workflow

