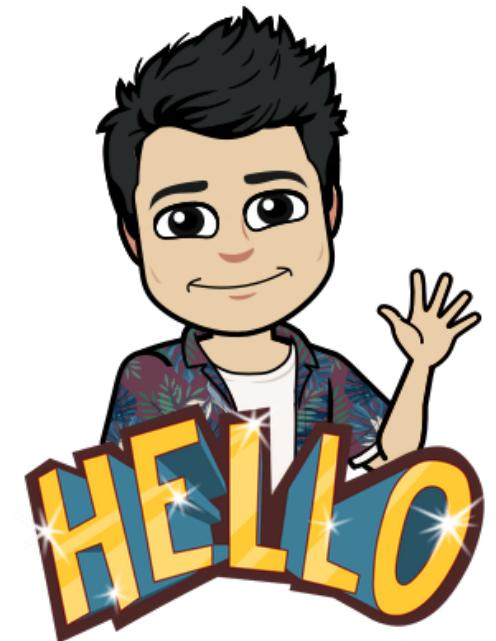


# Introduction to Microsoft Azure



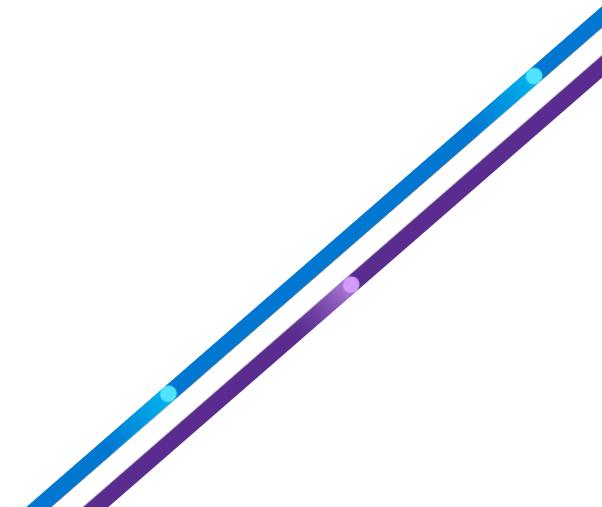
# About Me

- Microsoft Learn Student Ambassador
- Mechanical Engineering Student @University of Calgary
- Passionate About Technology and Education
- Chess



# What is the Cloud?

- Delivery of computing services over the internet
  - Servers
  - Databases
  - Networking
  - Software
  - Analytics
  - Intelligence



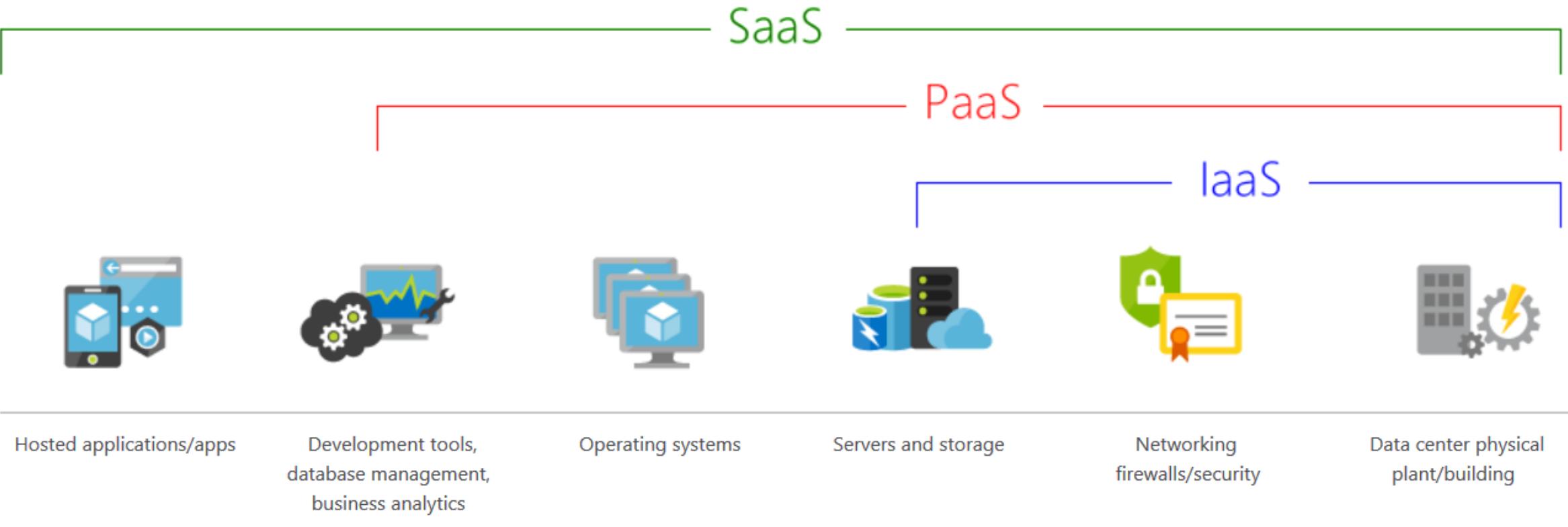
# What is Cloud Computing?

- A means of offering faster innovation, flexible resources, and economies of scale.
- Reliable
  - Applications can run consistently w/ no apparent downtime
- Scalable
  - Vertically – Increasing RAM / CPU
  - Horizontally – By adding instances of a resource, 2 VMs instead of 1 VM
- Elastic
  - Always can be configured to have the resources you need.

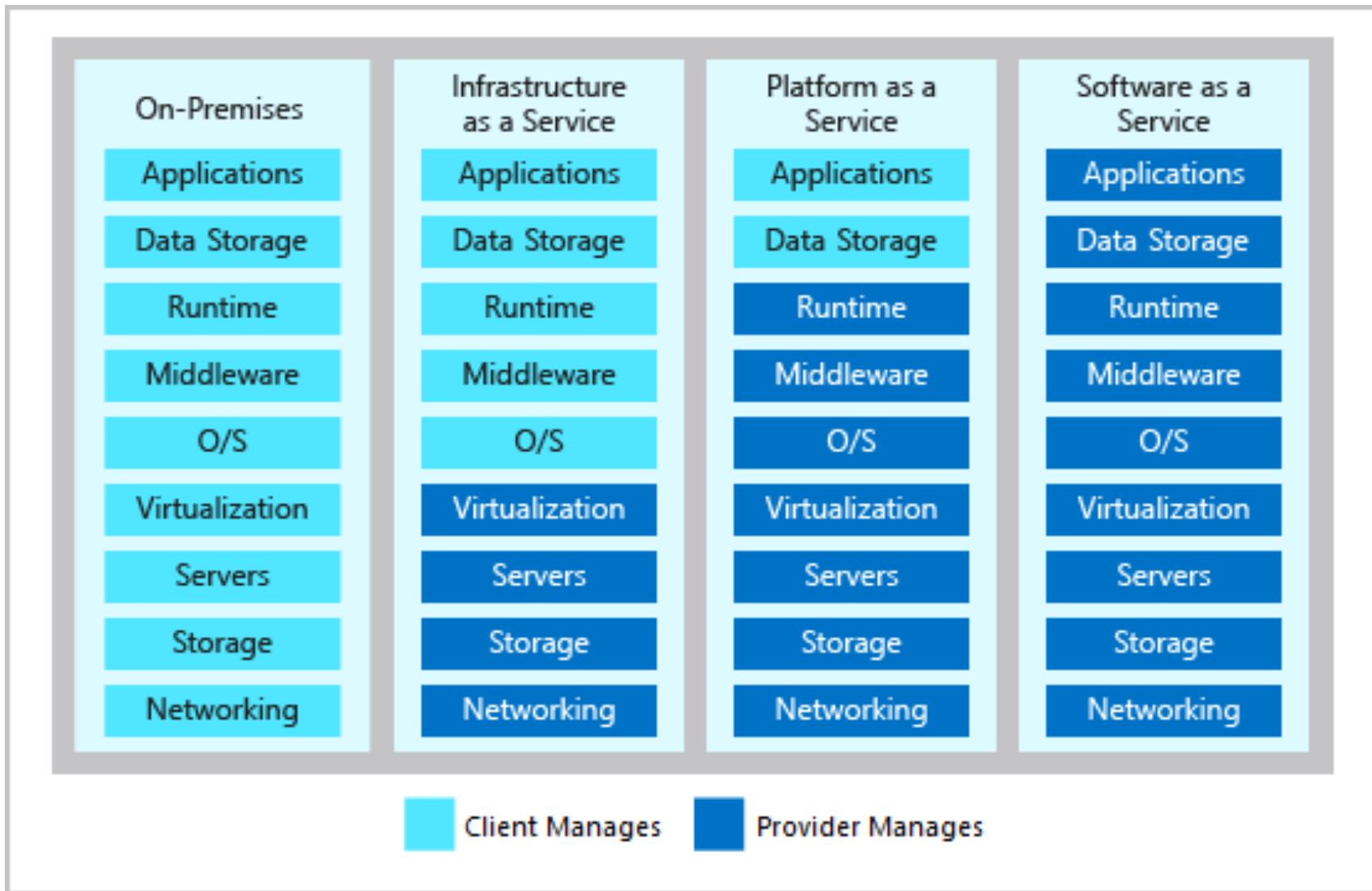
# Cloud Service Models

Computing Model	Description
IaaS (Infrastructure as a Service)	The cloud provider keeps the hardware up to date, but you, the user, take care of maintaining the OS and configuring the network. Ex/ Azure VMs are fully operational virtual compute devices running in Microsoft's datacenters. Setting up VM is faster than configuring a physical server.
PaaS (Platform as a Service)	The cloud provider manages the VMs and networking resources, but you take care of deploying these applications. Ex/ Azure App Services provides a managed hosting environment where developers can upload their web applications without having to deal with the physical hardware and software requirements.
SaaS (Software as a Service)	The cloud provider manages all aspects of the application environment. All you need to do is provide your data to the application managed by the cloud provider. Ex/ Office 365 is a fully working version of Office that runs in the cloud. All you need to do is create your account, and start making content.

# Cloud Service Models

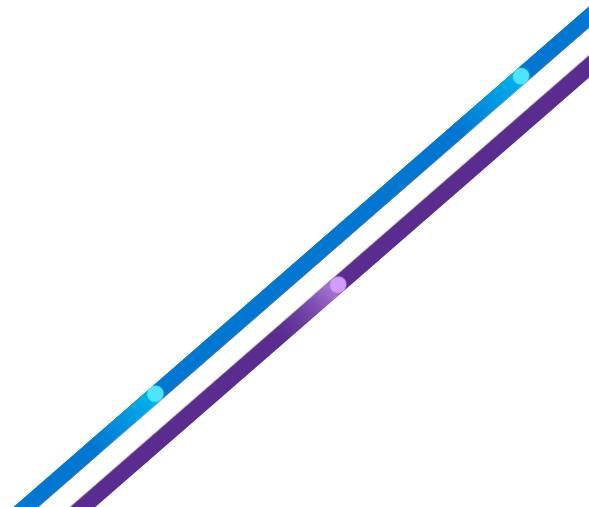
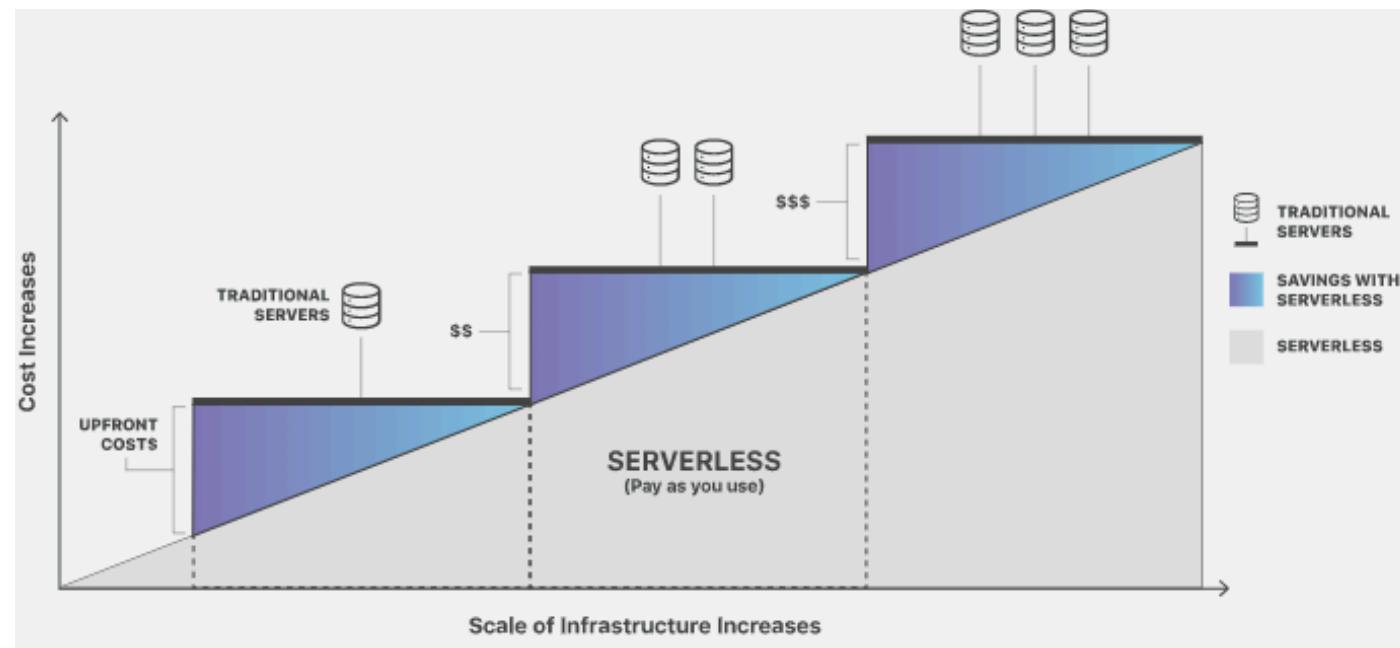


# Cloud Service Models



# Serverless Computing

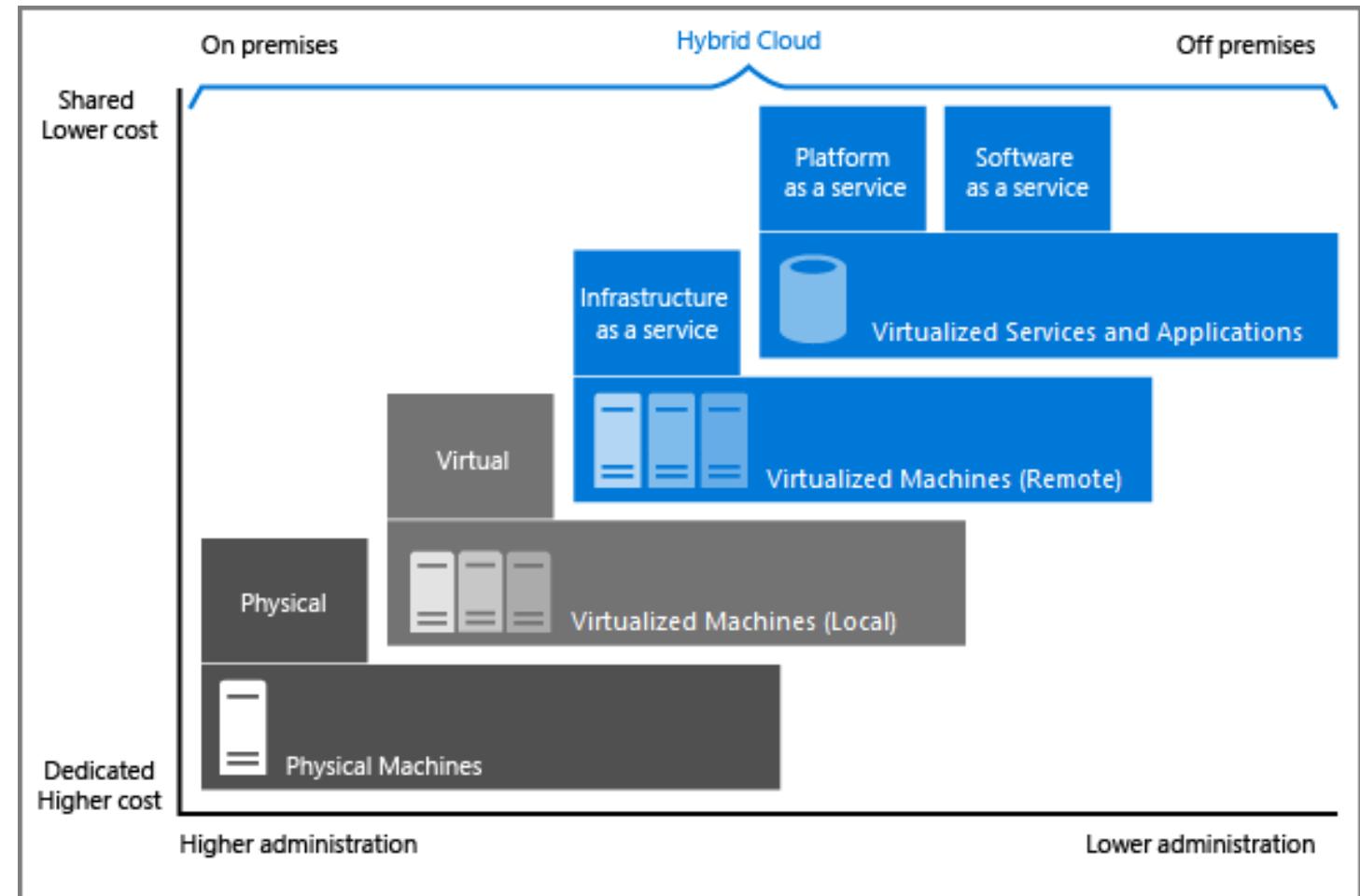
- Enables developers to build applications faster by eliminating the need for them to manage infrastructure.
- Kind of like PaaS, but you don't need to worry about scaling and managing the infrastructure.



# What is a Public, Private, and Hybrid Cloud?

Deployment Model	Description
Public Cloud	<ul style="list-style-type: none"><li>• Services are offered over the internet and available to anyone to purchase</li><li>• Cloud resources are owned and operated by a third-party cloud service provider and delivered over the internet.</li></ul>
Private Cloud	<ul style="list-style-type: none"><li>• Computing resources used strictly by users from one business or organization.</li><li>• Either located physically at your organization's on-site datacenter or hosted by a third-party service provider.</li></ul>
Hybrid Cloud	<ul style="list-style-type: none"><li>• This computing environment combines a public and a private cloud by allowing them to communicate with each other.</li></ul>

# Illustration of Deployment Models



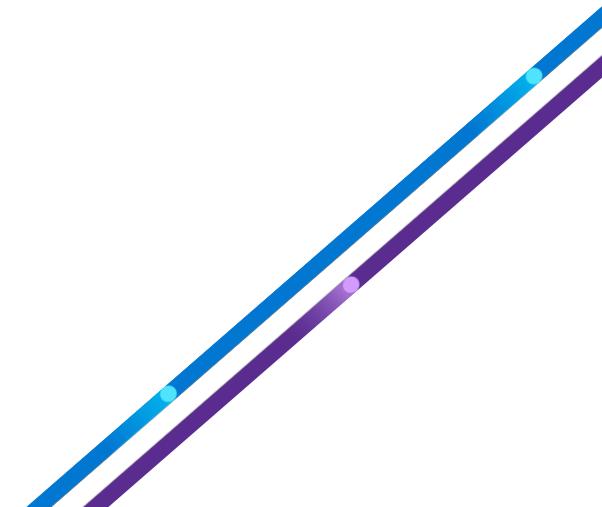
# What is Azure?

"A set of continually expanding set of cloud services that help your organization meet your current and future business challenges. Azure gives you the freedom to build, manage, and deploy applications on a massive global network using your favorite tools and frameworks."

It provides you with more than 100 services that enable you to do everything from running existing apps on VMs to exploring new software paradigms, such as intelligent bots and mixed reality (Google Hololens 2 if you're interested)

# The Ultimate Question: Why?

- As jobs are transformed by the technologies of today, we need to reskill > 1E9 people by 2030
- By 2022, 42% of core skills required to perform existing jobs are expected to change
- Growth Mindset > Fixed Mindset



# What can you do to learn more?

- Go to: aka.ms/certifications
- Pick a learn path, lots of fundamental certifications too
- Coding workshops on Github to get started with using Azure and utilizing cloud computing
- Linkedin.com/in/izumlot

MICROSOFT LEARN

## Microsoft Certifications

Earn certifications that show you are keeping pace with today's technical roles and requirements. Select a job role to discover certification paths.

[Go to Certification Dashboard](#)

Developer Developers design, build, test, and maintain cloud solutions.	Administrator Administrators implement, monitor, and maintain Microsoft solutions.	Solution Architect Solutions Architects have expertise in compute, network, storage, security.
Data Engineer Data Engineers design and implement the management, monitoring, security, and privacy of data using the full stack of data services.	Data Scientist Data Scientists apply machine learning techniques to train, evaluate, and deploy models that solve business problems.	AI Engineer AI Engineers use Cognitive Services, Machine Learning, and Knowledge Mining to architect and implement Microsoft AI solutions.
DevOps Engineer DevOps Engineers combine people, process, and technologies to continuously deliver valuable products and services that meet end user needs and business objectives.	Security Engineer Security Engineers implement security controls and threat protection, manage identity and access, and protect data, applications, and networks.	Functional Consultant Functional Consultants leverage Microsoft Dynamics 365 and Microsoft Power Platform to anticipate and plan for customer needs.

### Become Microsoft Certified

Microsoft has certification paths for many technical job roles. Each of these certifications consists of passing a series of exams to earn certification.

**Fundamentals certifications**  
Recommended start. Ideal for individuals just starting in technology or thinking about a career change.

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- Microsoft 365 Certified: Fundamentals
- Microsoft Certified: Power Platform Fundamentals

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**Role-based certifications**  
Choose a role-based certification to begin learning valuable job role skills.

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- Microsoft Certified: Power Apps + Dynamics 365 Developer Associate
- Microsoft Certified: Dynamics 365 Sales Functional Consultant Associate

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**Additional certifications**  
Explore specialty, Microsoft Certified Educator, and Microsoft Office technical certifications.

- Microsoft Certified: Azure for SAP Workloads Specialty
- Microsoft Certified Educator
- Microsoft Office Specialist: Microsoft Word Expert (Word and Word 2019)

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