

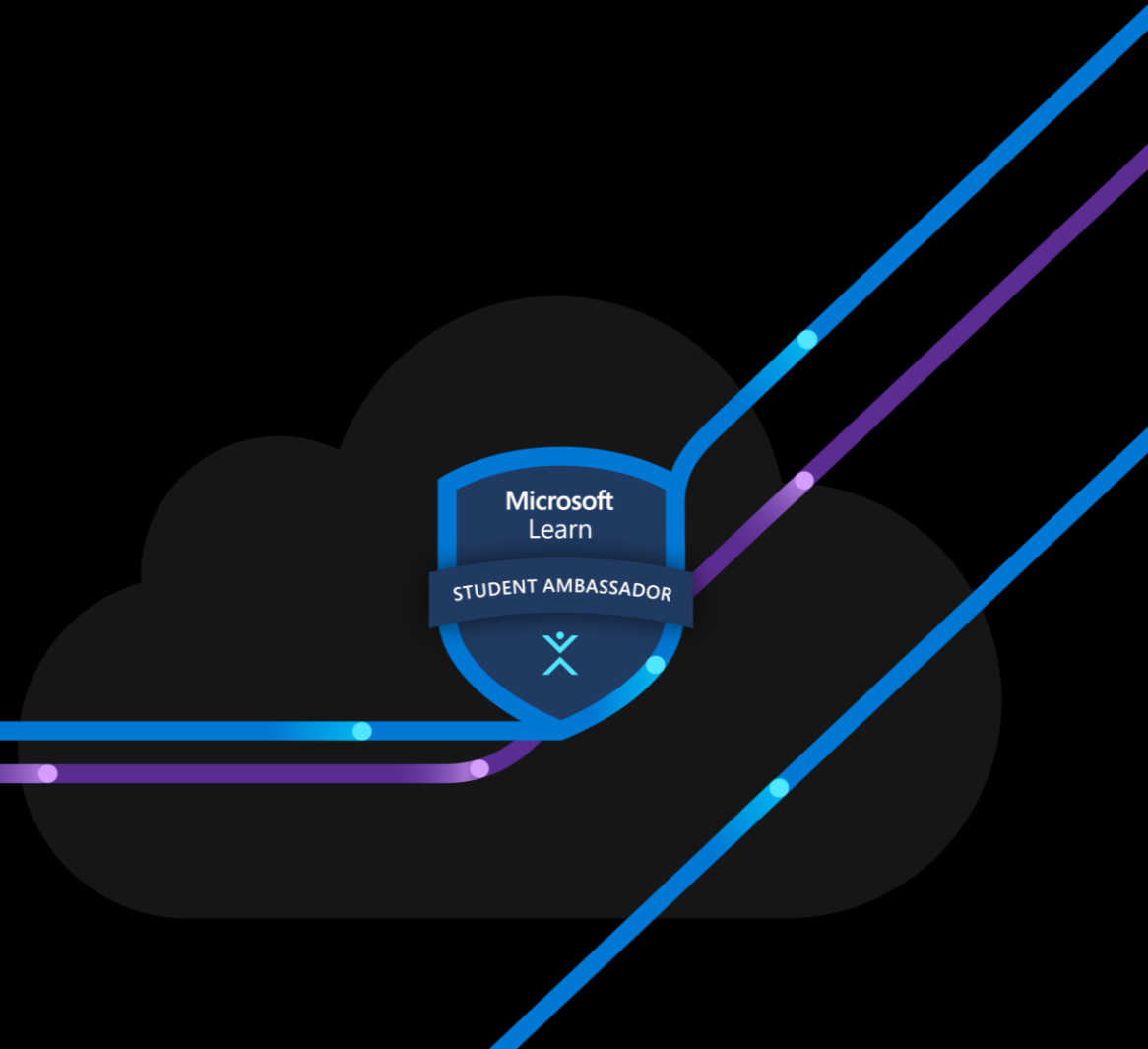
Microsoft
Learn

STUDENT AMBASSADOR



End to End AI Discord Bot

Using NodeJS and Deploying to Azure App Services





Tejas Morkar

Microsoft Learn Student Ambassador

About Me

Alpha Microsoft Learn Student Ambassador

Management Head at DSC PCCoE

Webmaster, ACM PCCoE Student Chapter

Co-Founder, DevsCollab Community

Department Editor, XRDS Magazine

Research-based AI Intern at CDAC



tejasMorkar.tech



[in/tejasMorkar](https://in.linkedin.com/in/tejasMorkar)



[@TejasMorkar](https://twitter.com/TejasMorkar)

Session Flow

- Machine Learning & TensorFlow.js
- Building a Discord bot using Discord.js
- Introduction to Microsoft Azure
- Applying for GitHub Student Developer Pack
- Deploying the bot to Azure App Services
- Learn more about Microsoft Learn Student Ambassador program and how you can apply to become an MLSA



Session Flow

- **Machine Learning & TensorFlow.js**
- Building a Discord bot using Discord.js
- Introduction to Microsoft Azure
- Applying for GitHub Student Developer Pack
- Deploying the bot to Azure App Services
- Learn more about Microsoft Learn Student Ambassador program and how you can apply to become an MLSA



Session Flow

- Machine Learning & TensorFlow.js
- **Building a Discord bot using Discord.js**
- Introduction to Microsoft Azure
- Applying for GitHub Student Developer Pack
- Deploying the bot to Azure App Services
- Learn more about Microsoft Learn Student Ambassador program and how you can apply to become an MLSA



Session Flow

- Machine Learning & TensorFlow.js
- Building a Discord bot using Discord.js
- **Introduction to Microsoft Azure**
- Applying for GitHub Student Developer Pack
- Deploying the bot to Azure App Services
- Learn more about Microsoft Learn Student Ambassador program and how you can apply to become an MLSA



Session Flow

- Machine Learning & TensorFlow.js
- Building a Discord bot using Discord.js
- Introduction to Microsoft Azure
- **Applying for GitHub Student Developer Pack**
- Deploying the bot to Azure App Services
- Learn more about Microsoft Learn Student Ambassador program and how you can apply to become an MLSA



Session Flow

- Machine Learning & TensorFlow.js
- Building a Discord bot using Discord.js
- Introduction to Microsoft Azure
- Applying for GitHub Student Developer Pack
- **Deploying the bot to Azure App Services**
- Learn more about Microsoft Learn Student Ambassador program and how you can apply to become an MLSA



Session Flow

- Machine Learning & TensorFlow.js
- Building a Discord bot using Discord.js
- Introduction to Microsoft Azure
- Applying for GitHub Student Developer Pack
- Deploying the bot to Azure App Services
- **Learn more about Microsoft Learn Student Ambassador program and how you can apply to become an MLSA**



It's Showtime!



But before that...

[mentimeter.com](https://www.mentimeter.com)



Session Flow

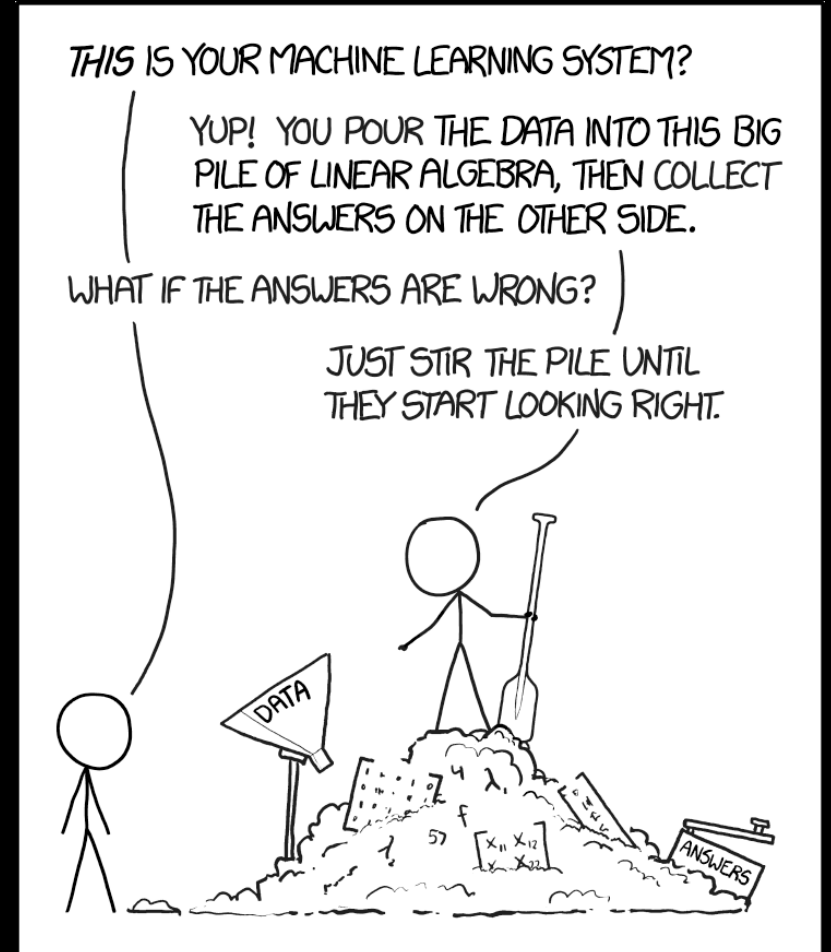
- **Machine Learning & TensorFlow.js**
- Building a Discord bot using Discord.js
- Introduction to Microsoft Azure
- Applying for GitHub Student Developer Pack
- Deploying the bot to Azure App Services
- Learn more about Microsoft Learn Student Ambassador program and how you can apply to become an MLSA



What is Machine Learning?

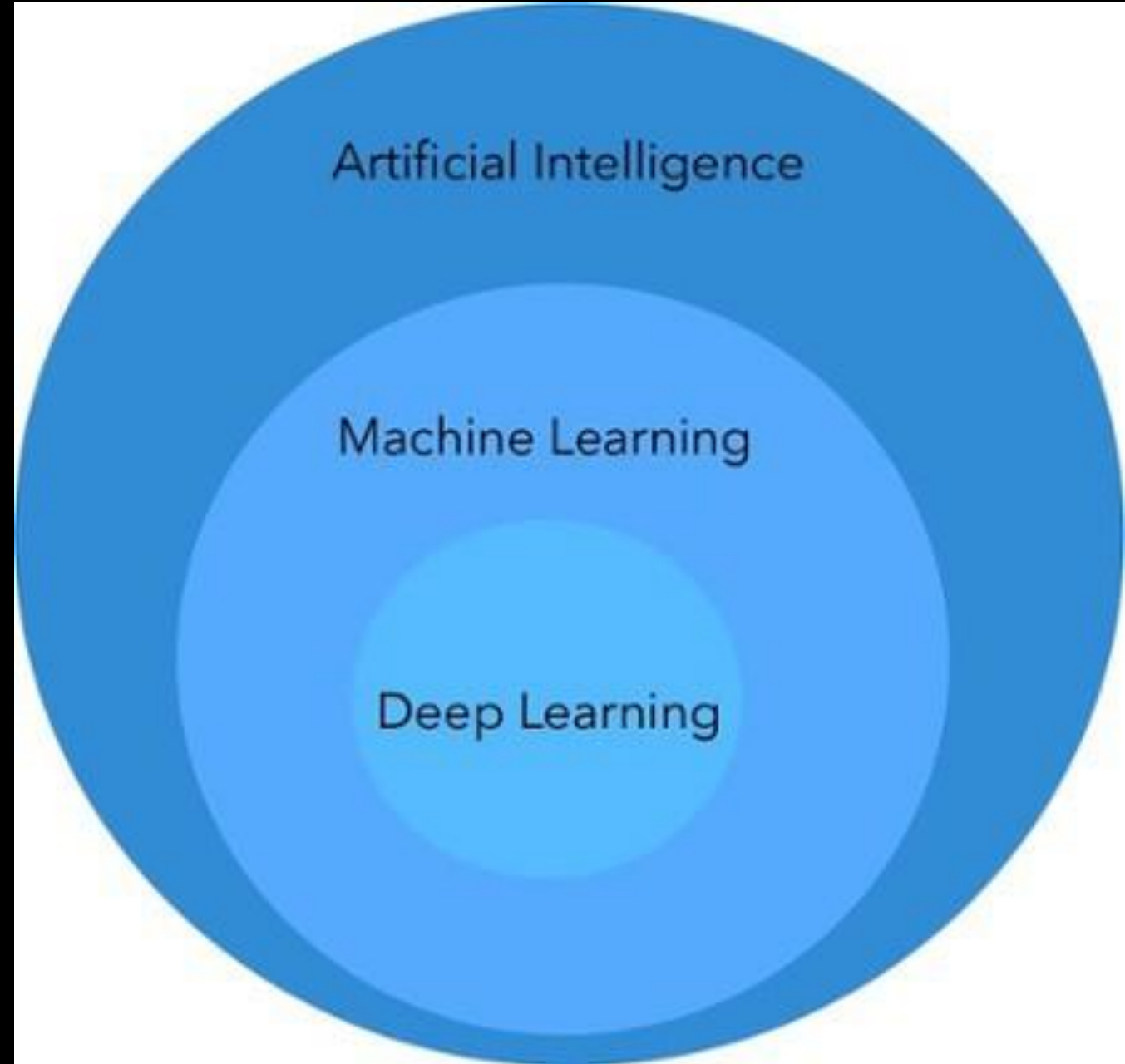
A process of solving a practical problem by

1. gathering a dataset, and
2. algorithmically building a statistical model based on that dataset

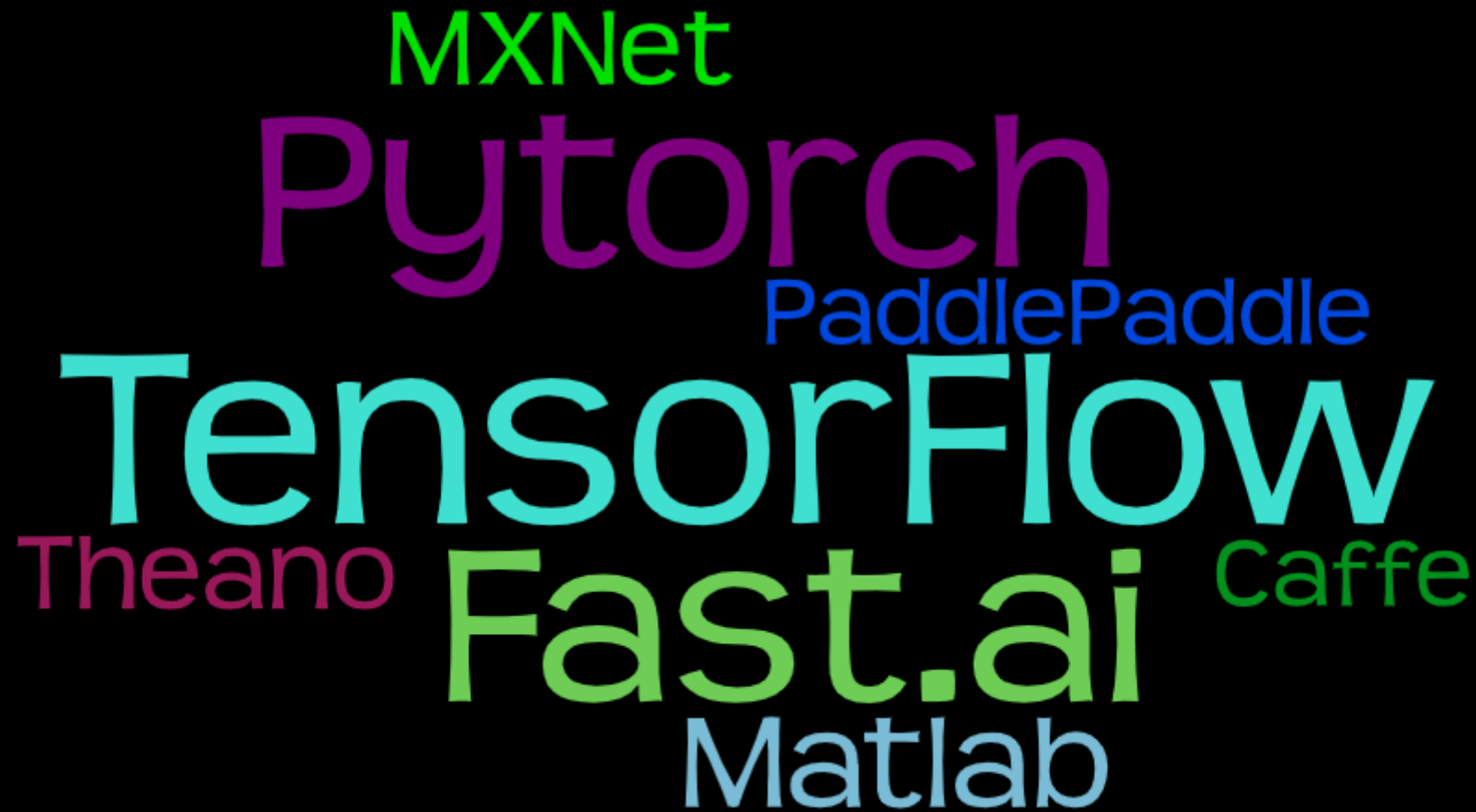


Artificial Intelligence, Machine Learning, and Deep Learning

They are not the same!



Deep Learning Frameworks



A word cloud of deep learning frameworks on a black background. The words are arranged in a cluster, with 'TensorFlow' being the largest and most central. Other prominent words include 'Pytorch', 'Fast.ai', 'MXNet', 'PaddlePaddle', 'Theano', 'Caffe', and 'Matlab'. The colors of the text vary, including shades of green, purple, blue, and cyan. In the bottom right corner, there are two parallel diagonal lines, one blue and one purple, with small white dots along them.

MXNet
Pytorch
PaddlePaddle
TensorFlow
Theano
Fast.ai
Caffe
Matlab

TensorFlow.js

TensorFlow for JavaScript

- Use off-the-shelf JavaScript models or convert Python TensorFlow models to run in the browser or under Node.js
- Retrain pre-existing ML models using your own data
- Build and train models directly in JavaScript using flexible and intuitive APIs

Learn more about it at <https://www.tensorflow.org/js>




Session Flow

- Machine Learning & TensorFlow.js
- **Building a Discord bot using Discord.js**
- Introduction to Microsoft Azure
- Applying for GitHub Student Developer Pack
- Deploying the bot to Azure App Services
- Learn more about Microsoft Learn Student Ambassador program and how you can apply to become an MLSA



Discord.js

npm install discord.js



```
const Discord = require('discord.js');
const client = new Discord.Client();

client.on('ready', () => {
  console.log(`Logged in as ${client.user.tag}!`);
});

client.on('message', msg => {
  if (msg.content === 'ping') {
    msg.channel.send('pong');
  }
});

client.login('token');
```

Session Flow

- Machine Learning & TensorFlow.js
- Building a Discord bot using Discord.js
- **Introduction to Microsoft Azure**
- Applying for GitHub Student Developer Pack
- Deploying the bot to Azure App Services
- Learn more about Microsoft Learn Student Ambassador program and how you can apply to become an MLSA



What is Cloud Computing?

Delivery of computing services over the internet, which is otherwise known as the cloud.

It includes:

- Servers
- Storage
- Databases
- Networking
- Software
- Analytics
- Intelligence



Advantages of the Cloud

Reliable

Scalable

Elastic

Agile

Geo-distribution

Disaster recovery



Cloud Service Models

IaaS

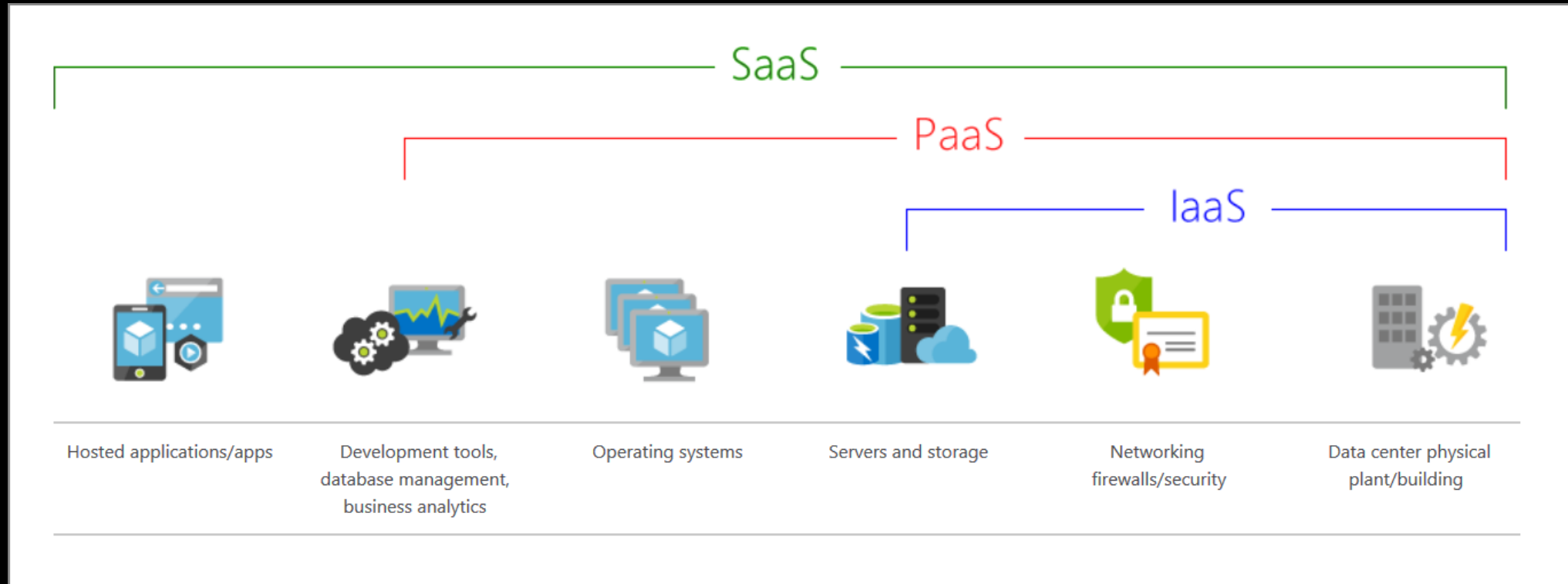
Infrastructure
as a Service

PaaS

Platform
as a Service

SaaS

Software
as a Service



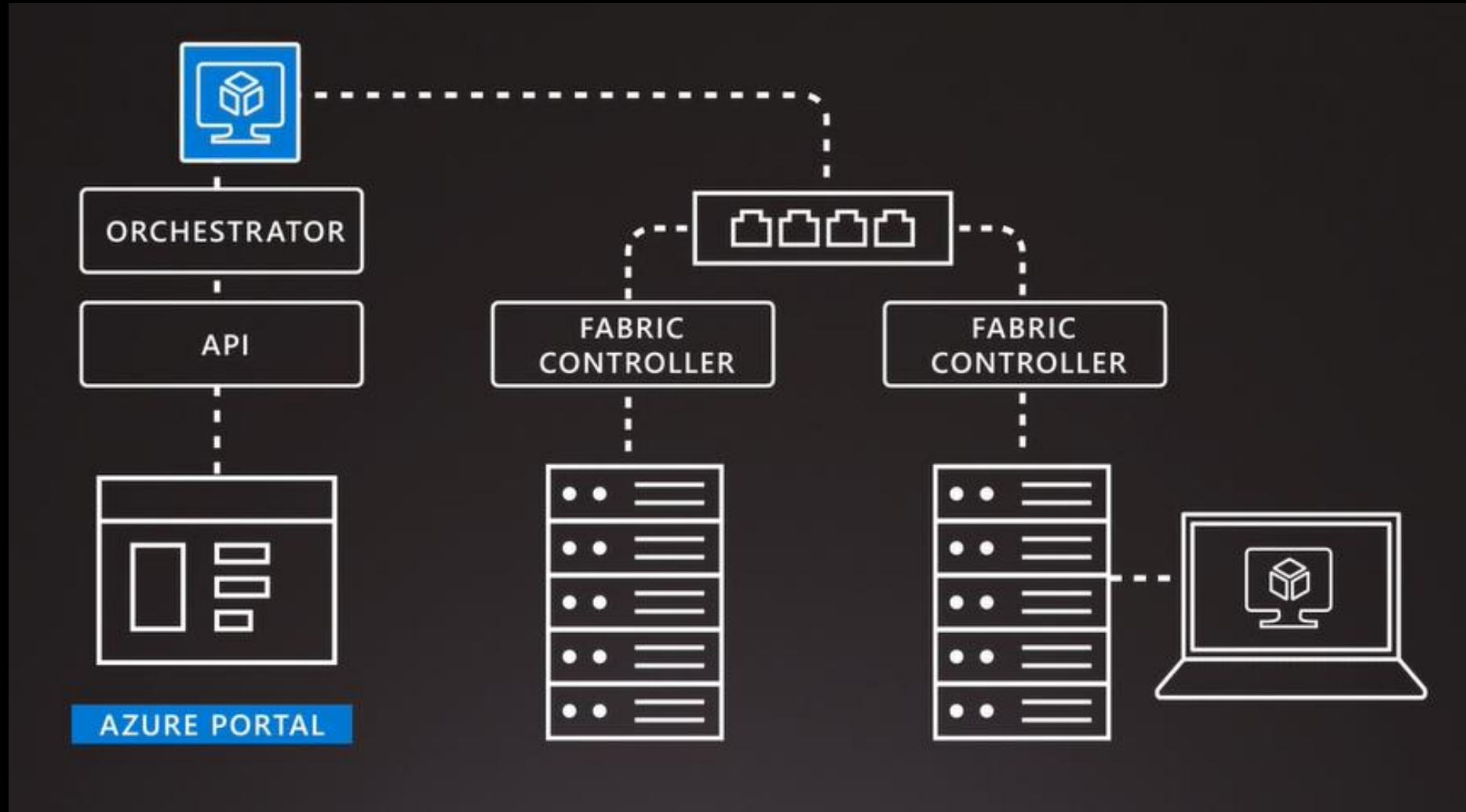
What is Azure?

Azure is a cloud computing service created by Microsoft

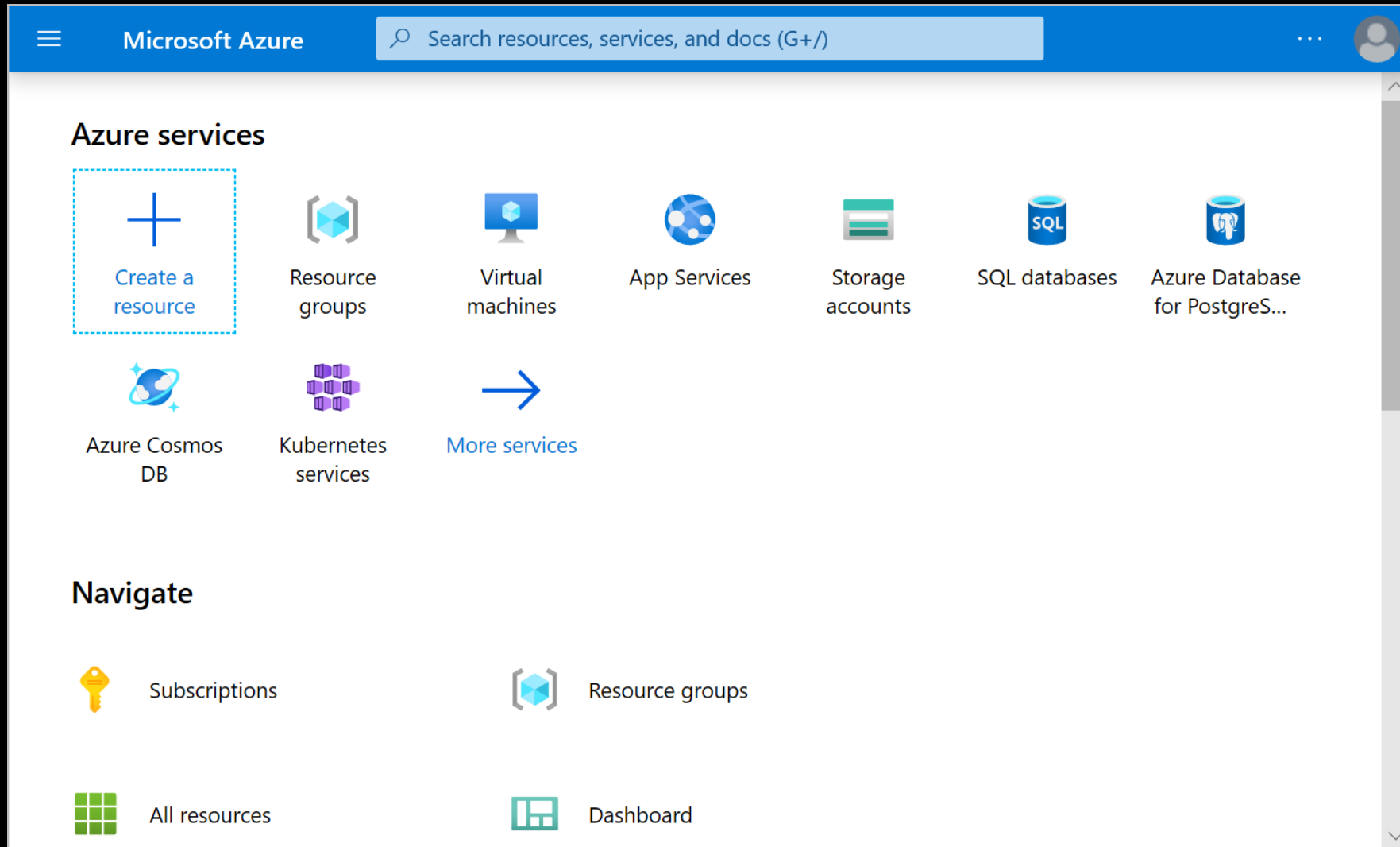
- Get more than 100 services on Azure
- Run your existing applications on virtual machines
- Explore new software paradigms, such as intelligent bots and mixed reality
- Use AI and machine-learning services that can naturally communicate with your users through vision, hearing, and speech



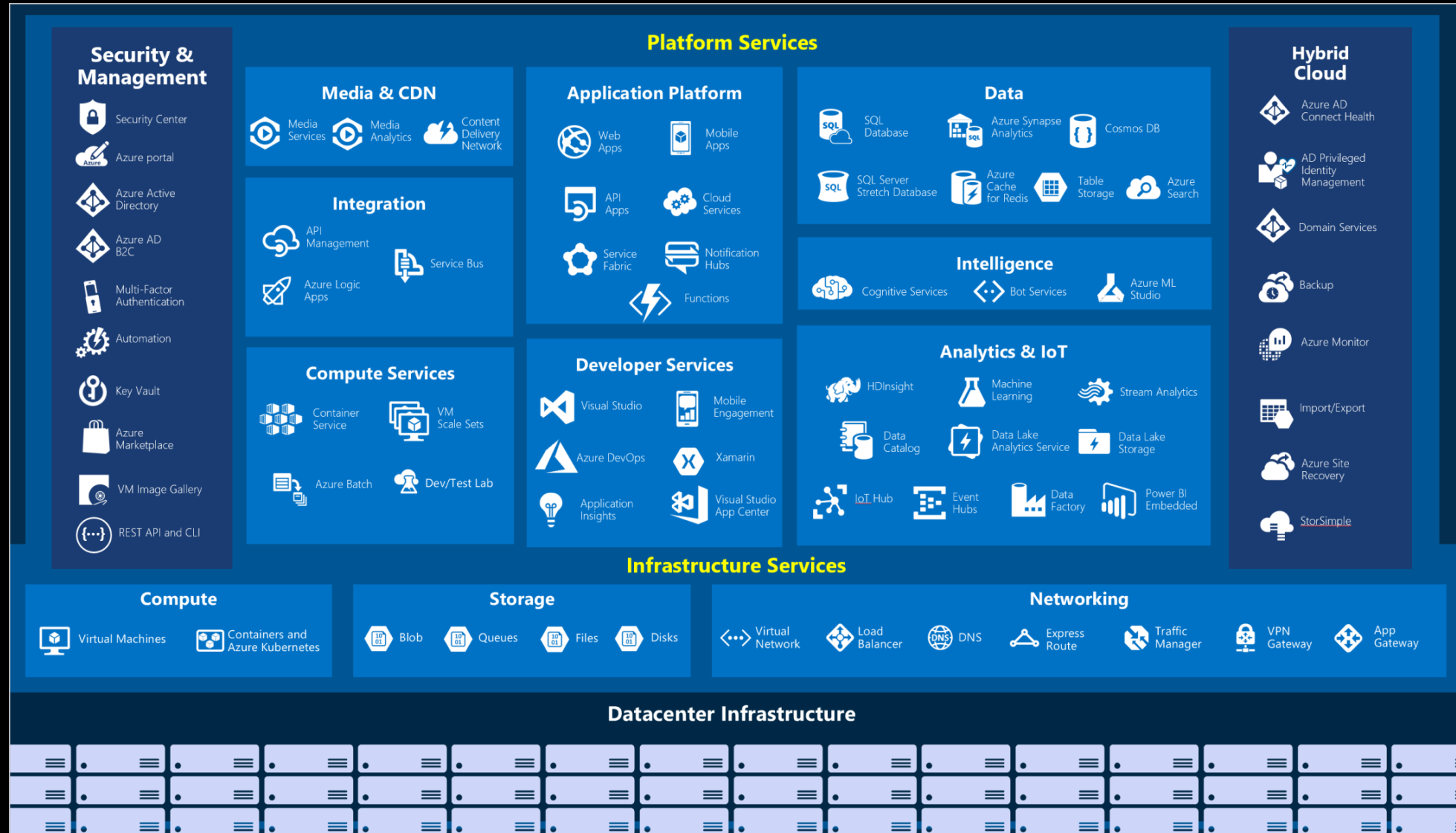
Behind the Scenes of Azure



Azure Portal



Azure Services



Azure for Students

<https://azure.microsoft.com/en-in/free/students/>

- Try Azure for Students free today
- Get \$100 credit to use in 12 months
- Free access to popular cloud services and developer tools
- No credit card required for verification
- Easy verification via GitHub Student Developer Pack

Session Flow

- Machine Learning & TensorFlow.js
- Building a Discord bot using Discord.js
- Introduction to Microsoft Azure
- **Applying for GitHub Student Developer Pack**
- Deploying the bot to Azure App Services
- Learn more about Microsoft Learn Student Ambassador program and how you can apply to become an MLSA



Apply Now!

<https://education.github.com/pack>



GitHub Student Developer Pack

Get the best developer tools

There's no substitute for hands-on experience, but for most students, real-world tools can be cost prohibitive. That's why we created the Pack with some of our partners and friends, like:



Travis CI



HEROKU



DigitalOcean



Session Flow

- Machine Learning & TensorFlow.js
- Building a Discord bot using Discord.js
- Introduction to Microsoft Azure
- Applying for GitHub Student Developer Pack
- **Deploying the bot to Azure App Services**
- Learn more about Microsoft Learn Student Ambassador program and how you can apply to become an MLSA



Add Azure App Service

Instance Details

Name: {WebAppName}

Publish: Code

Runtime Stack: Node 14 LTS

Operating System: Windows

Region: Central US

App Service Plan

Windows Plan: Create New

Sku and size: Free F1



Create a WebJob

Add WebJob

Name: {WebJobName}

File Upload: WebJobFolder.zip*

Type: Continuous

*The zip should contain the index.js file and the node_modules folder



Session Flow

- Machine Learning & TensorFlow.js
- Building a Discord bot using Discord.js
- Introduction to Microsoft Azure
- Applying for GitHub Student Developer Pack
- Deploying the bot to Azure App Services
- **Learn more about Microsoft Learn Student Ambassador program and how you can apply to become an MLSA**



Microsoft Learn Student Ambassadors

<https://studentambassadors.microsoft.com>

Become a Student Ambassador

Finding your community is more important than ever as classes and social activities take place virtually. Amplify your impact and bring together your peers to learn new skills, solve real-world problems, and build communities across the globe.

[Apply now >](#)

Be a force for good-locally and globally

You might find yourself helping fellow students build their coding skills online with Microsoft Learn, organizing a virtual hackathon to solve real-world challenges, earning certifications, or building digital communities—it's all up to you.



Apply



Profiles



Events

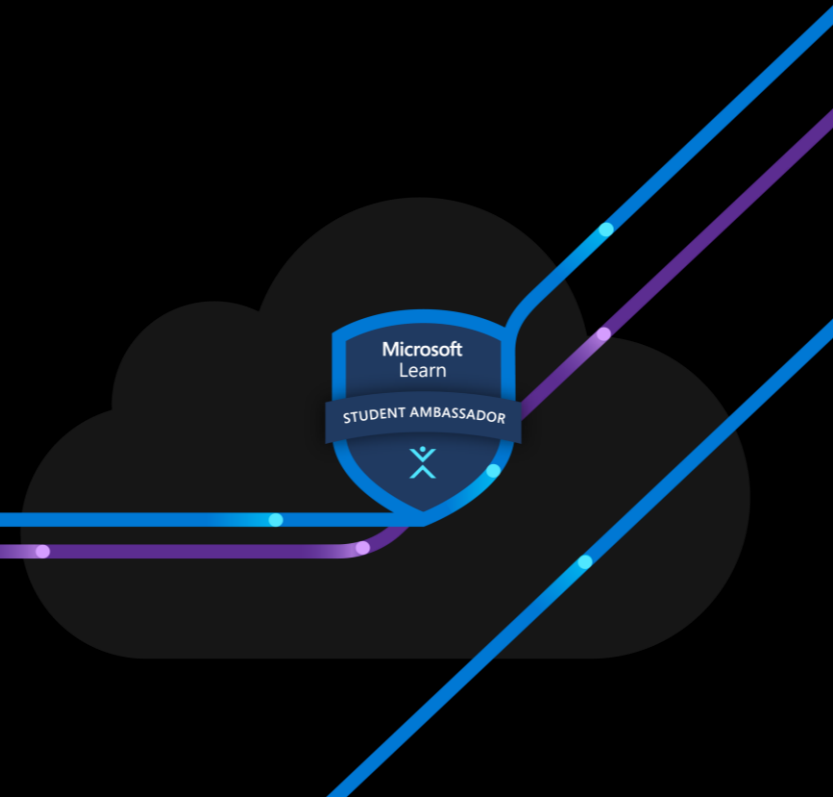


Imagine Cup



MS Learn

If you have any doubts...





I YOU KNOW
WHAT YOU
GOTTA D

Ask Questions!



Thank You!

