

Microsoft  
Learn

STUDENT AMBASSADOR



Microsoft Learn  
Student Ambassadors



# Microsoft Mini-Hack

AI Gaming Tournament



# Microsoft Student Ambassadors Program

<https://studentambassadors.microsoft.com/>

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.

- Make a difference with students from around the world
- Grow your skills and build your reputation as a tech insider
- Become a leader in your local tech community and empower your peers

Student Ambassadors get access to unique resources like global student network on Microsoft Teams and a Microsoft 365 account, and can earn badges for activities and contributions to unlock additional benefits such as cloud credits.



# Introduction

## What is AI Gaming

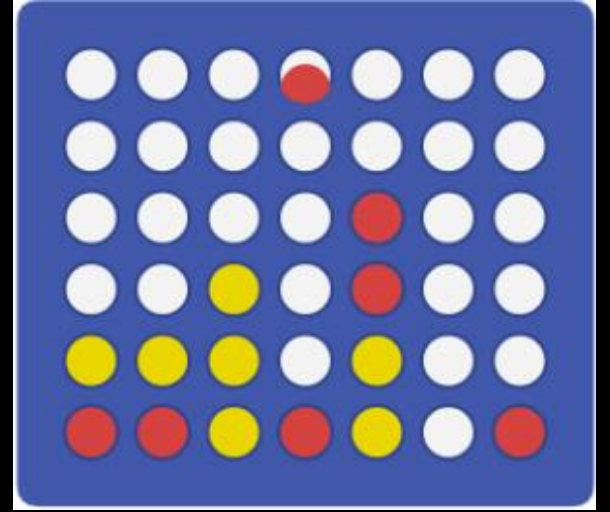
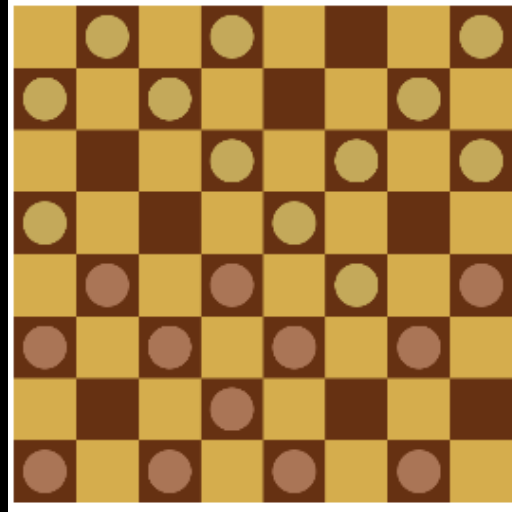
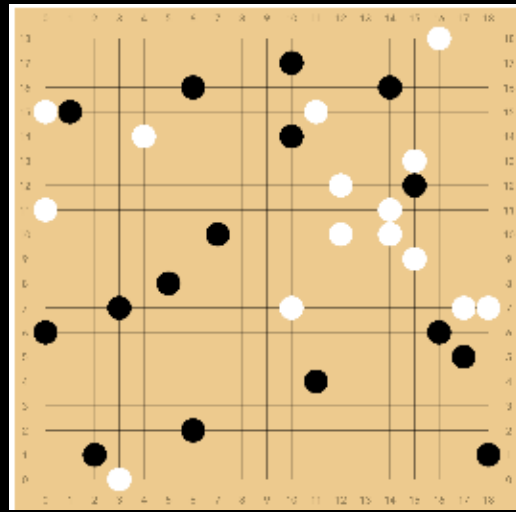
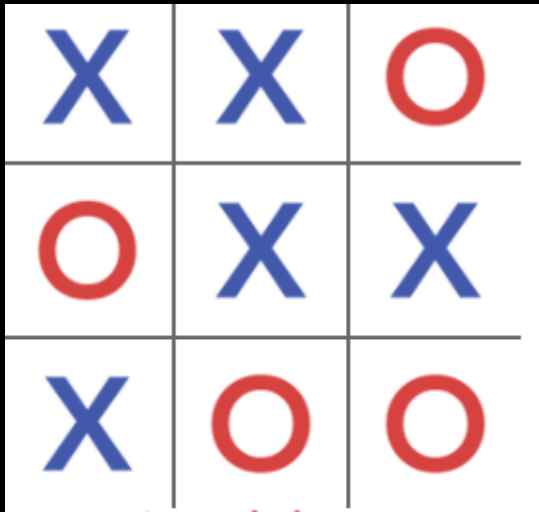
Algaming.com is a platform that allows computer programs (bots) to challenge each other in games, puzzles and competitions, with the added incentive of winning cryptocurrency (Bitcoin and Satoshi)



# AI Gaming Platform

Write code to play strategy games

Games like Noughts & Crosses, Go, Checkers and Four in a Row



# Sign Up For The Event

<https://www.aigaming.com/event?code=038-797-630>



## Microsoft Mini-Hack: AI Gaming Tournament

Microsoft / AI Gaming Mini-Hack Event

12th December 2021 12:00 PM India Standard Time

(12th December 2021 6:30 AM UTC)

Maximum places available: 200

Hey techies! Microsoft Learn Student Ambassadors are back with a new exciting event for you all. Have you heard about DeepMind's AlphaZero? It is an AI program that won against world champions and chess engines! Have you ever wondered how it works? So here we are, with a guide to create an AI bot to play a game. Learn to use Microsoft Cognitive Services for advanced Image Recognition and concepts of Artificial Intelligence to build an AI which plays a simple game. Compete against your friends in a tournament on the Cloud. The event will be held on 12th December 2021 from 12:00 noon to 4 PM IST. Register now as seats are limited! So hurry up gamers and programmers!

- Eligibility: All university and high school students.
- No need to worry if you don't know Python. All required knowledge will be provided on the spot!
- Note: All times are in Indian Standard Time(IST)

Contact Aaryan Arora on [aaryan.arora@studentambassadors.com](mailto:aaryan.arora@studentambassadors.com) if you have any questions before event.

Join at 12pm for the event!

## SIGN UP FOR EVENT

*Important:* Please use a personal (for example Outlook) email address, not a student email address.

**SIGN UP NOW**

☐ I agree to receive updates

Signing up will:

1. Create you an account on AI Gaming
2. Enter your account into this private event

By signing up you agree to our [Ts & Cs](#).

# Event Goal

Help you to write Game Playing 'Bots' to compete on the AI Gaming platform using Microsoft's Cognitive API

Steps to start developing your game playing bot and to **enter your bot into the event's tournament:**

1. Sign up for an account on the [aigaming.com](https://aigaming.com) site.
2. Get an API Key for the Microsoft Computer Vision API.
  1. Sign up for a Microsoft Azure account by [following these instructions](#).
  2. [Follow the instructions here](#) to Create a Computer Vision API key.
3. Practice Tournament at 1:45pm to give you an introduction about how to submit your code.
4. After you have made some progress in developing your code, make sure it is submitted to the event's tournament. Having your code run in the tournament is the only way that we measure your participation in the event.
5. We will conduct the final tournament at 3:45 pm. So be sure to submit you code on time

# Understanding Match Game

Match the tiles using the Microsoft Cognitive API to identify the subject of each image

Use the template code to get started with Computer Vision and OCR A.I. functions



## MICROSOFT MATCH GAME

Select two matching tiles to make a successful move.



Each successful move earns 1 point.



The first person to match all tiles earns an additional 5 points.



The player with the most points when the game ends wins!



The Bonus Category multiplier doubles any points won.

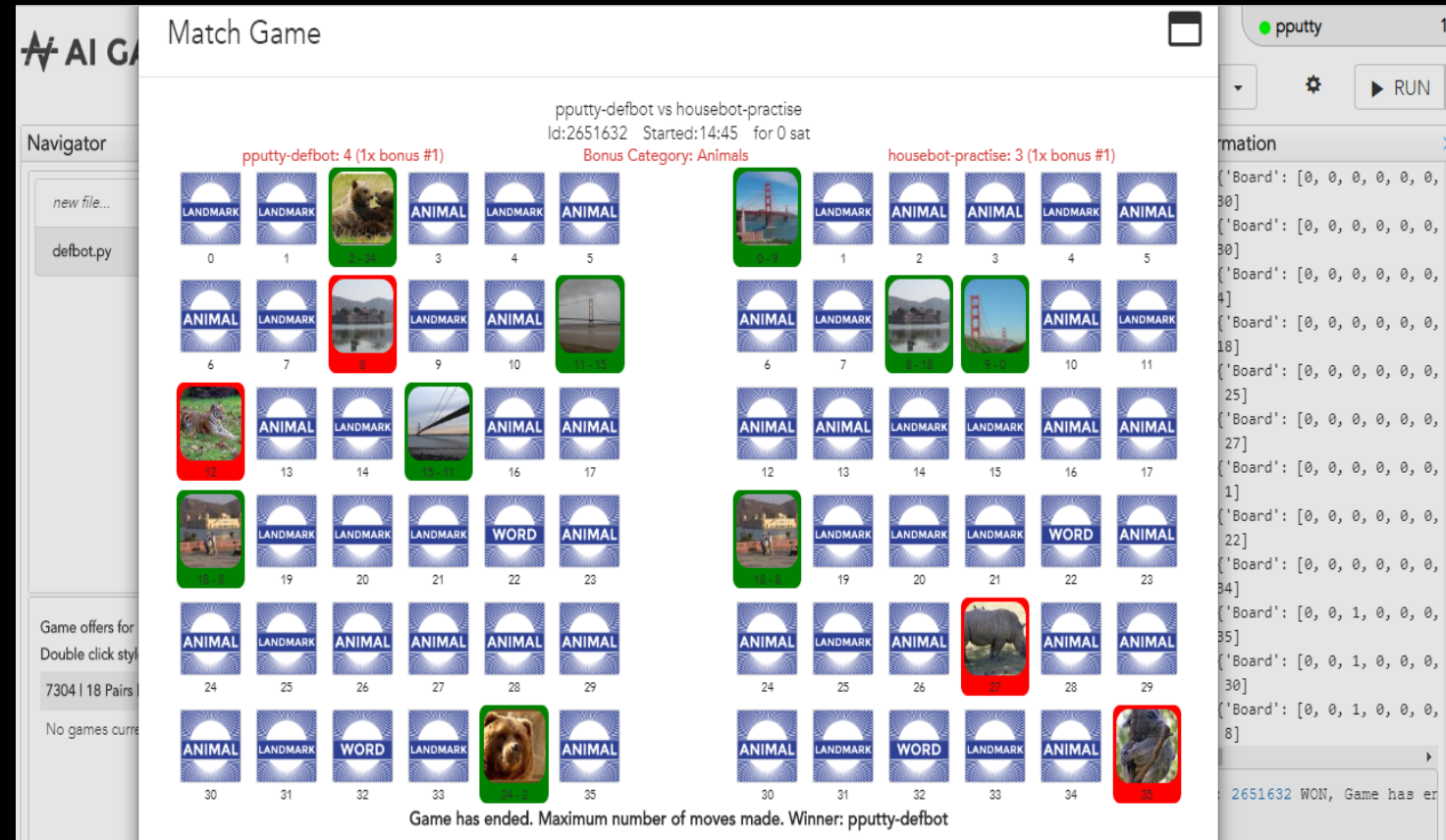


Consecutive Bonus Category matches doubles the multiplier each time.



## To get started:

1. Sign up to AI Gaming portal
2. Go to the Editor tab
3. Select Match Game from Game type
4. Create a new Microsoft API Template.py file
5. Enter your API Key in the placeholder
6. Click run to see how your bot works



# Sign up for a Microsoft Azure account - [aka.ms/Azure4Students](https://aka.ms/Azure4Students)

## Try Azure for Students free today

Get \$100 credit and free developer tools. Sign up without a credit card.

Start free

[See FAQ for eligibility >](#)

Microsoft Azure

**Azure for Students**  
Get \$100 in Azure credits and free access to popular cloud services plus developer tools like Visual Studio Code

**1 About you**

Country/Region  
United Kingdom

First name  
Jonathan

Last name  
Robinson

Email address for important notifications  
jonathan@therobinsons.com

Phone  
Example: 1632 456789  
This field is required

Company VAFID  
Optional

By proceeding you acknowledge the [privacy policy](#) and [subscription agreement](#)

Print

**2 Identity verification by phone**

**3 Agreement**

Microsoft Azure

**Azure for Students**  
Get \$100 in Azure credits and free access to popular cloud services plus developer tools like Visual Studio Code

**1 Student Verification**

Academic verification required

The account you are signed in is not yet verified to access offer benefits. Please use the form below to verify.

Verification method  
Verification code

Enter your 25-digit verification code.  
XXXXXX-XXXXXX-XXXXXX-XXXXXX-XXXXXX

Verify academic status

Microsoft Azure

Search resources, services, and docs (G+)

**Azure services**

Create a resource

Virtual machines

App Services

Storage accounts

SQL databases

Azure Database for PostgreSQL

Azure Database for MySQL

Azure Cosmos DB

Kubernetes services

Function App

More services

**Navigate**

Subscriptions

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All resources

Dashboard

**Tools**

Microsoft Learn

Azure Monitor

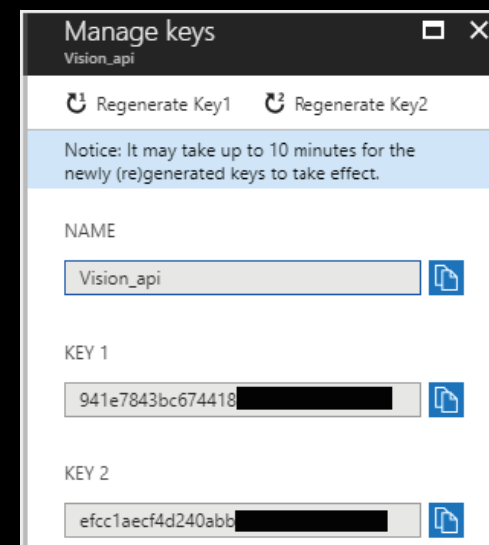
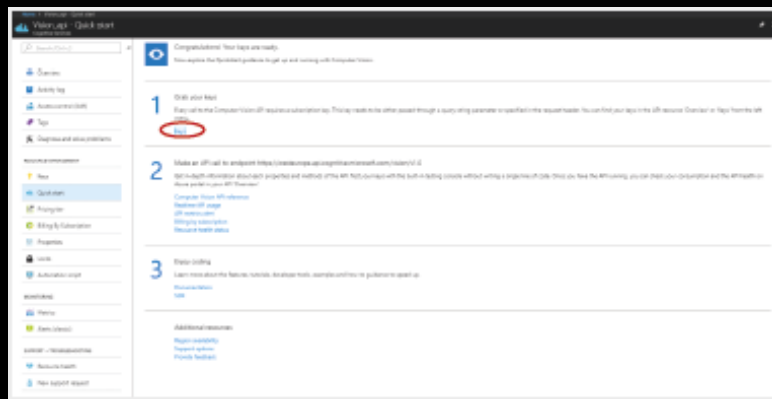
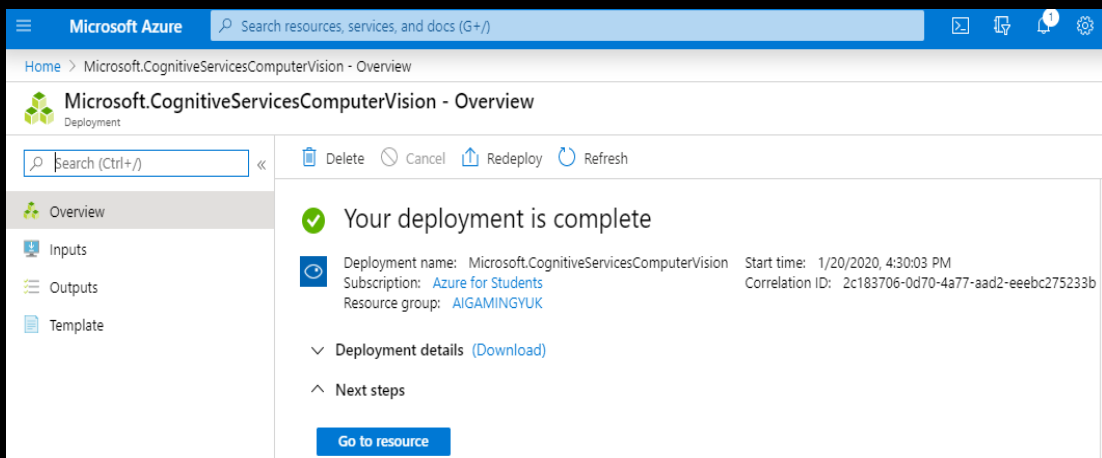
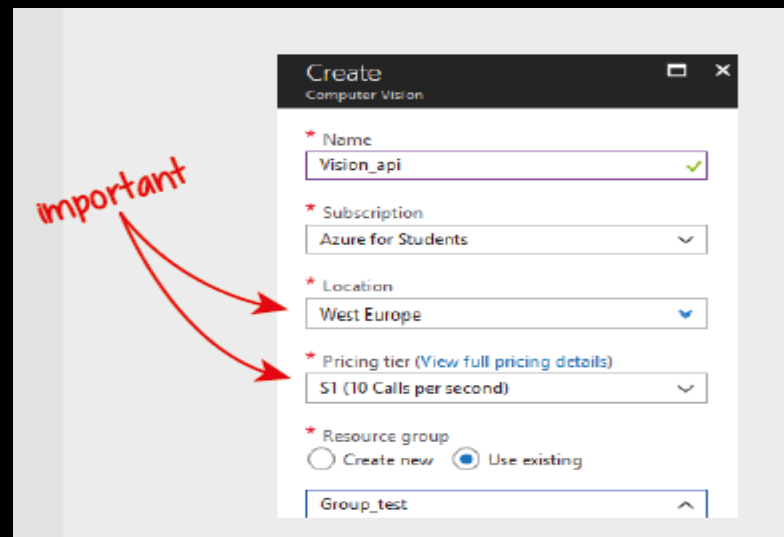
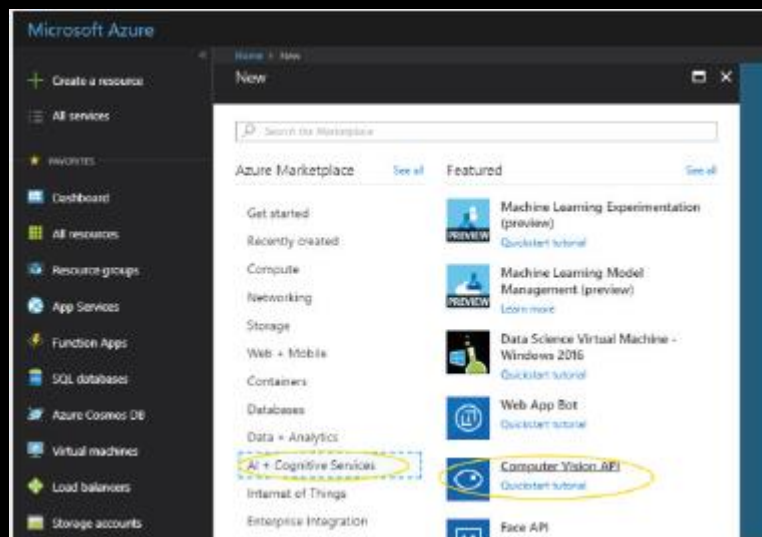
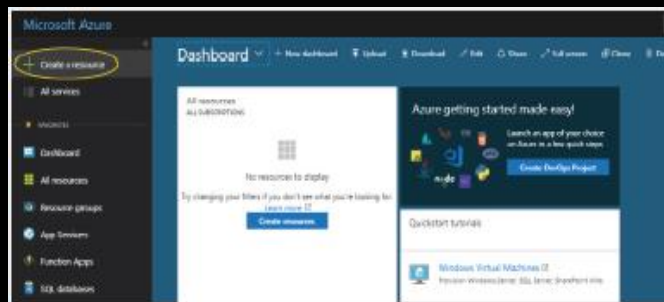
Security Center

Cost Management

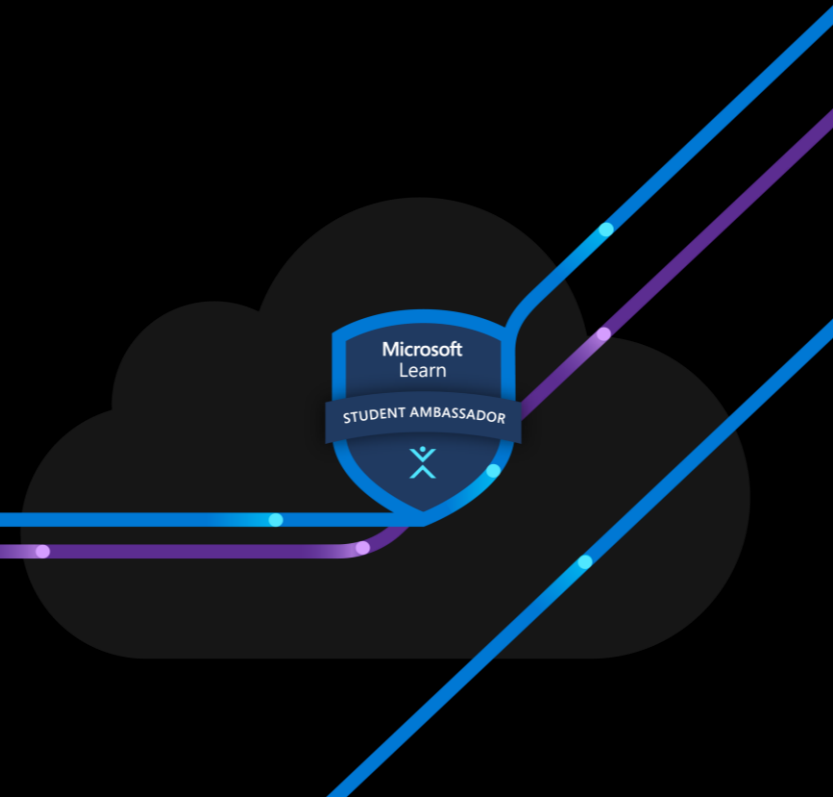
Useful links

Azure mobile app

# Creating a Computer Vision API Key -> Create a Resource in Microsoft Azure Portal



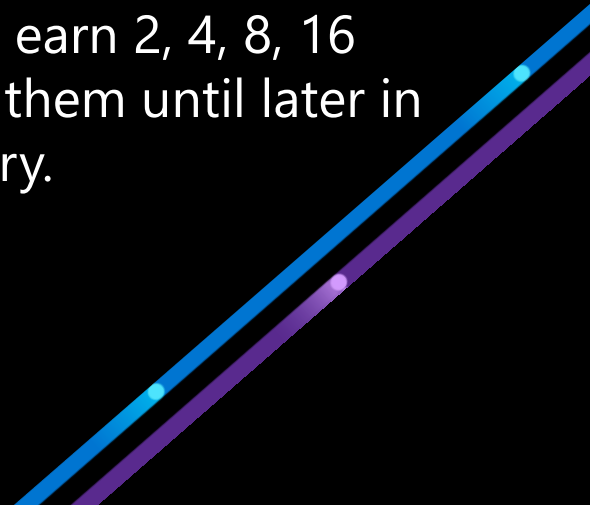
# Demo Time



# Things To Implement In The Template Code

1. Implement Landmark matching
2. Implement text recognition and word matching
3. Read the tile backs to match tiles from the same category
4. Check if you can match tiles in the bonus category
5. Wait before matching any tiles to match tiles in consecutive Bonus Categories

Each round has a "bonus category". If in that round you match two tiles of that category, you will receive bonus points. The bonus starts at 1 point for a total of 2, but each sequential match in the required bonus category doubles the points of the previous match. So you can earn 2, 4, 8, 16 points etc. A strategy might be to determine where matches are but not guess them until later in the game and then ensure where possible you match tiles of the bonus category.



# Prizes

Microsoft Technical Certification Exam Vouchers (worth about \$150) for the winners and one for one random participant

ACM VIT is providing additional prizes to the top 3 winners

1<sup>st</sup> Position – Rs 1000

2<sup>nd</sup> Position – Rs 600

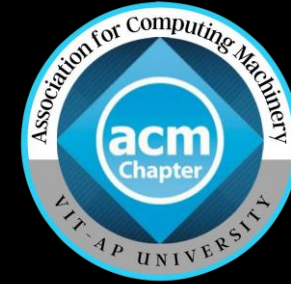
3<sup>rd</sup> Position – Rs 400

 **Participation certificates\* and digital swags for all!**

\*You must submit your code for getting certificates



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# Thank you!

