



# Microhacks Coach Guide

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## Overview

The goal of this document is to help provide guidance for the delivery of Microhack. It serves as a comprehensive resource for instructors and coaches to effectively facilitate the Microhack sessions. By following the structured methodologies and leveraging the core assets provided within, coaches can ensure that participants receive a consistent and enriching learning experience.

The guide outlines core assets, Microhack topics, FAQ, and other practical tips to streamline the Microhack process. Coaches will find guidelines on how to set up, manage, and evaluate sessions, ensuring that each Microhack meets its objectives and delivers maximum value to participants.

Furthermore, it includes answers to frequently asked questions, addressing common challenges and providing solutions to potential issues that may arise during the sessions. This comprehensive approach equips coaches with the knowledge and tools they need to successfully implement and deliver the Microhack, fostering an environment of innovation and collaboration.

## What is a Microhack?

A Microhack is a program created by Microsoft Americas Office of the CTO as a program of various technical hand-on hack experiences. The key ideas that make Microhacks different from traditional technical hackathons are the following:

- Half-day (4-hour) duration
- Guided hands-on hack based on a core set of technical challenges
- Leverage Microsoft technologies to solve challenges
- Additional Advanced Challenges that are optional for the attendee to continue learning after the hack



*Example Microhack Agenda*

The Microhack program was designed to provide Microsoft employees and customers with hands-on experience utilizing Microsoft technology in a meaningful way to solve business problem scenarios. While enabling a deep learning of emerging technologies that are meaningful to the attendees and their businesses.

## Core Assets

The following are the core assets included with every Microhack package. These assets should be the only resources needed to host a Microhack; excluding working internet access, development environment access, platform access, devices, etc.

### Setting the Stage | PowerPoint Deck

This is a PowerPoint presentation that should be leveraged to introduce the Microhack to the attendee audience. Each Microhack *Setting the Stage* presentation is unique based on the content of the Microhack. The following sections are included:

- Welcome & Introduction
  - An introduction to the goals of the Microhack. Also, a chance to introduce the delivery team, attendees, customer, or any other entities which are important to highlight.
  - *It is recommended to update this section, tailored to your audience for attendees - including teams, people, QR code, and survey link.*
- Setting the Stage
  - A deeper dive into what the attendees should expect during the Microhack, including the agenda, goals, how they will be working, etc. This section also includes a technical overview of the relative Microhack topic.
- Hands-On Lab
  - Agenda placeholder during hands-on hacking time for attendees.
- Show & Tell
  - Outline of how the attendees should think about and package up their experiences and learnings during the Microhack to share with the rest of the attendee groups.
- Closing
  - Any closing remarks or reflections on the Microhack experience. This section can also include any post-Microhack surveys.
  - *It is recommended to update this section, tailored to your audience for attendees - including teams, people, QR code, and survey link.*

### Microhack Challenges | PDF

A comprehensive document detailing the guided challenges that attendees are expected to tackle within the scope of the designated Microhack topic. This document will not only outline the specific tasks and goals but will also provide in-depth technical information on relevant Microsoft technologies, ensuring that participants are well-equipped to address and overcome the challenges presented.

## Microhack Repository | GitHub Repository

A comprehensive GitHub starter repository is available for the attendees, designed to facilitate the initial environment setup and streamline the process of completing the Microhack challenges. This repository includes pre-configured templates, essential libraries, and detailed documentation that ensure a seamless integration of required tools and technologies. By leveraging this starter repository, participants can focus more on innovation and application rather than setup, thus enhancing their overall Microhack experience.

## Delivery Platform | Microsoft Teams (Virtual/Hybrid)

If the Microhack is being delivered virtually or hybrid, a communication platform such as Microsoft Teams should be leveraged.

## Microhack Topics

### RAG AI

**Release Date:** February 28<sup>th</sup>, 2025

**Topic:** Retrieval Augmented Generation AI

**Challenges:** 4 Core Challenges, 3 Advanced Challenges – (7 total)

**Technologies:** Azure AI Search (primary), Azure Bicep, Azure OpenAI, Semantic Kernel, Azure Application Service, Azure Key Vault, Azure Content Safety, Azure Load Testing, Azure Private Link, Azure Virtual Network

**Core Assets:**

- [Setting the Stage](#)
- [Microhack Challenges](#)
- [Microhack Repository](#)
- [Delivery Platform \(Virtual/Hybrid\)](#)

### Agentic AI

**Release Date:** April 11<sup>th</sup>, 2025

**Topic:** Agentic

**Challenges:** 3 Core Challenges – (3 total)

**Technologies:** Microsoft Copilot Studio (primary), Azure AI Foundry (primary), Microsoft Power Platform, Microsoft Power Automate, Azure Grounding with Bing Search, Azure AI Agent Service Azure Bicep, Azure OpenAI, Semantic Kernel, Azure Content Safety

**Core Assets:**

- [Setting the Stage](#)
- [Microhack Challenges](#)
- [Microhack Repository](#)
- [Delivery Platform \(Virtual/Hybrid\)](#)

## Delivery

It is highly recommended to send out formal invitations to all attendees well in advance of the Microhack event. These invitations should include detailed information about the event schedule, objectives, and any preliminary requirements. Specifically, ensure that the invitations contain comprehensive instructions for Challenge 0 pre-work, which is essential for attendees to complete prior to the commencement of the Microhack. This preparatory work will enable participants to familiarize themselves with the core concepts and technologies, thereby enhancing their engagement and productivity during the event.

## Coaches

It is imperative that dedicated Microhack coaches be assigned to each Microhack event to ensure a seamless and productive experience for all participants. Ideally, one coach should be assigned to every 1-3 teams, which allows for personalized guidance and support. These coaches play a crucial role in facilitating the Microhack by providing expert knowledge and assisting attendees through various challenges they may encounter.

The primary objective of the coaches is to enhance the learning experience of the attendees, swiftly resolving any issues that are not directly related to the Microhack itself. Furthermore, when teams face difficulties and their successful completion of the Microhack Challenges is at risk, coaches are there to offer strategic guidance and solutions. This support ensures that participants remain engaged and can effectively navigate through the tasks, ultimately leading to a fruitful and enriching Microhack experience for everyone involved.

## Attendee Teams

The Microhack is designed for small teams consisting of 3-7 participants. It is highly recommended that the teams be formed with careful consideration to ensure a balanced mix of technical skill levels and familiarity with the relevant technologies. This thoughtful composition of teams will foster a more collaborative and effective learning environment, enabling participants to maximize their potential during the event.

The responsibility of assembling these teams rests with the coaching team, who should finalize the team configurations prior to the commencement of the Microhack.

## Breakout Rooms (Virtual/Hybrid)

[Microsoft Teams Breakout rooms](#) should be prepared for each team well before the event's commencement. This preemptive measure ensures that all participants can seamlessly transition to their designated Breakout rooms when the hands-on hacking sessions begin. By doing so, attendees can dive straight into collaborative activities without any delays or

technical hitches, thereby optimizing their engagement and productivity during the Microhack.

Properly configured Breakout rooms create a conducive environment for focused discussions and problem-solving. Each team, equipped with a virtual space tailored to their needs, will be able to leverage the full potential of Microsoft Teams' collaborative features. This setup not only facilitates smoother interactions but also enhances the overall learning experience by allowing participants to immediately apply pre-learned concepts and collaboratively tackle the challenges presented during the event.



## Frequently Asked Questions

Q: How to contact the Microhack content creators?

A: Please email [microhackcoaches@microsoft.com](mailto:microhackcoaches@microsoft.com) and include Microhack in the subject.