



WOMEN IN DATA SCIENCE



#WiDS2020

Call for Code 2020

**COVID-19 and climate change action
through open source technology**

developer.ibm.com/callforcode



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A grid of 20 video call thumbnails featuring diverse participants. The thumbnails are arranged in a 4x5 grid. The central text is overlaid on the middle rows. A blue button with the text 'Watch the replays' is located in the center of the grid, overlapping the middle row of thumbnails.

CALL FOR CODE ON-DEMAND:

Fight the impact of COVID-19

[Watch the replays](#)

Our world

A young boy with dark skin, wearing a white short-sleeved button-down shirt, is standing at a stainless steel sink in what appears to be a school. He is focused on washing his hands with a large, bright green bar of soap. Water is running from a chrome faucet into the sink. The background is slightly blurred, showing a classroom or school hallway with colorful posters on the wall.

“We are at a critical point in the global response to COVID-19 – we need everyone to get involved in this massive effort to keep the world safe.”

Dr. Tedros Adhanom Ghebreyesus
WHO Director-General

“...the disease that is ravaging our world.”


[-UN News](#)

“...now threatening all of humankind.”

[-UN News](#)

“...the true fight of our lives.”

[-UN News](#)



"The climate crisis is caused by us - and the solutions must come from us. We have the tools: technology is on our side."

António Guterres
Secretary-General of the United Nations

*Background image: 2019 Call for Code Winner
Prometeo's field test, Barcelona, Spain, February 2020

75%

of earth's carbon emissions are caused by our cities [.](#)

1/4

of people are likely to live in chronic water shortage areas by 2050. [.](#)

37m

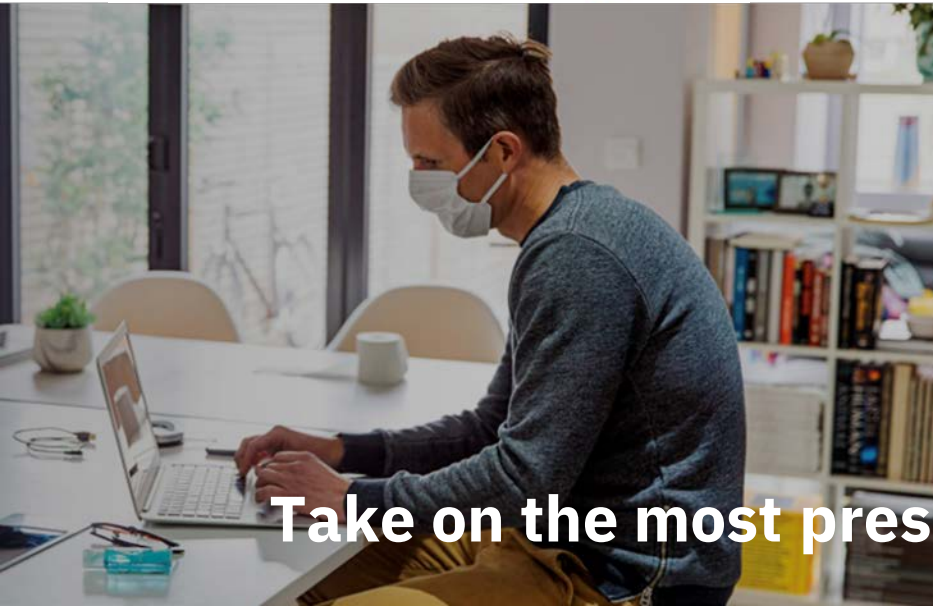
people are severely effected by natural disasters every year. [.](#)

2020 CALL FOR 2020 CODE®

Global Challenge

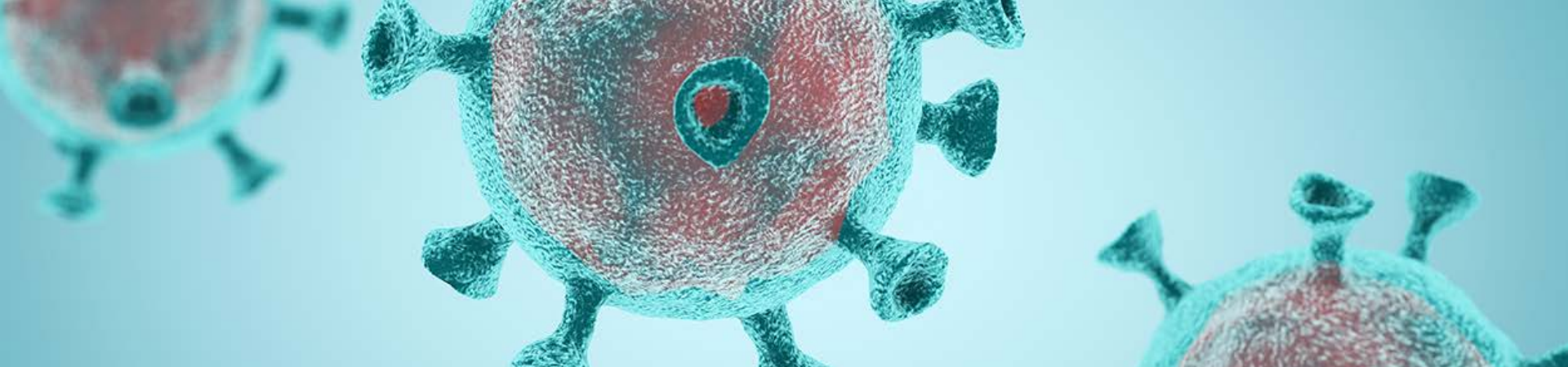
COVID-19 has revealed limits of the systems we take for granted, compromising our health, our planet, and our survival.

We've expanded the 2020 Call for Code Global Challenge to take on COVID-19, while we remain steadfastly committed to combating climate change.



Take on the most pressing issues of our time

*What our world needs
to fight COVID-19*



Crisis Communication

When a new disease emerges, **communications systems** are one of the first systems to be overwhelmed



Remote Education

School closures & social distancing is leaving **students** at home for an indeterminate amount of time



Community Cooperation

Understanding what is happening in your neighborhood & how **you can give & get help** is vital in uncertain times

*What our world needs
to fight Climate Change*



Water Sustainability



Energy Sustainability



Disaster Resiliency

2B+

people are living with risk of
reduced access to freshwater
resources

60%

of total greenhouse gas
emissions are due to current
energy methodologies

1M

people have died because of
natural disasters since the turn of
the century

Join the fight.

Build solutions that fight back.

- Build & deploy solutions to **help seize & reduce** the impact of **COVID-19**
- Build & deploy solutions to help **halt & reverse** the impact of **Climate Change**



In 2020, Call for Code is aligned to the UN 75th anniversary global conversation theme of **climate change**, with a focus on:

- **water sustainability**
- **energy sustainability**
- **disaster resiliency**

The 2020 Call for Code Global Challenge is being expanded to address the **COVID-19 pandemic**, with a focus on:

- **crisis communication**
- **remote education**
- **community cooperation**

Join a **movement** of:

- **210,000+** problem solvers
- **165+** nations
- **8,000+** applications built

Have the chance to win:

- **\$200,000** USD
- Open Source support from **The Linux Foundation**
- Meetings with **mentors** & potential **investors**
- **Implementation** support through **Code and Response™**



Call for Code
Founding Partner



Call for Code
Creator



Call for Code
Charitable Partner



Call for Code
Affiliate



Call for Code
Founding Partner



Call for Code
Creator



Call for Code
Charitable Partner



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Rules

1. Submissions –

Submissions must use one or more [IBM Cloud services](#) or [IBM Systems](#). Use of sponsor or affiliate APIs and open source libraries is also encouraged.

2. Team size –

Teams of up to five (5) participants, each at least 18 years old, are allowed.

3. Joining teams –

A participant may not be part of multiple teams.

4. Participation agreement –

All team members must have accepted the [2020 Participation Agreement](#) at the time they submit to be eligible.

5. Application standards –

Applications must be new and built for the 2020 competition, but they may use code that was open sourced and publicly available to all other participants as of February 26, 2020.

6. Winners –

Winning teams will be subject to a code review after submissions close.

Judging

Submissions will be judged equally across 4 primary criteria which evaluate whether the solution solves a real-world problem and uses technology effectively.

- Completeness and transferability
- Effectiveness and efficiency
- Design and usability
- Creativity and innovation



<https://developer.ibm.com/callforcode>

Four easy steps to get involved



Accept the challenge

Learn about the competition, see what you can win, and start coding with a free IBM Cloud account.

Register →



Build with open tech

Learn how you can make the most of resources like code patterns, expert videos, and tutorials to build your idea.

Start coding →



Find your squad

Whether you need to find teammates, meet experts, ask questions, or share ideas - there's a community for you.

Start networking →



Submit your idea

Tell us what you've built and how. Submit this with your Participation agreement for a chance to win \$200,000.

Submit your solution →

How do I explore the starter kits?

developer.ibm.com/cn/callforcode/

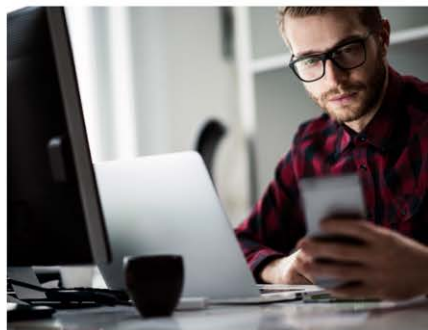


迎战新型冠状病毒

当新型冠状病毒在全球范围内扩散时，我们必须团结一致，并迅速采取行动，对抗这场有可能成为现代社会最大危机的疫情。

使用云端开源技术，构建行之有效的解决方案，提供即时危机通信，增强远程教育，加强社区合作。

使用入门工具包 →



“我们正处于全球应对新型冠状病毒的关键时刻，我们需要每个人都行动起来，众志成城，一起维护世界安全。”

— Tedros Adhanom Ghebreyesus 博士, 世界卫生组织总干事

应对气候变化

在 IBM 最近针对 3,000 多名开发者、急救人员和社会活动家进行的全球调查中，有 77% 的受访者认为气候变化是目前最紧迫的问题，同时，有 79% 的受访者认为可以通过技术来减缓或应对气候变化。

我们呼吁使用最新技术大胆创新，力求解决能源可持续性、水资源可持续性和灾难预防问题。获奖解决方案将会部署在最需要帮助的社区中。

使用入门工具包 →



“气候危机是我们自己酿成的苦果，也必须由我们自己来解决。我们拥有先进的技术，一定能解决这次危机。”

— 联合国秘书长 António Guterres



developer.ibm.com/cn/callforcode/getstarted/covid-19/

developer.ibm.com/cn/callforcode/getstarted/climate-change/

一些开发者知道他们想为 Call for Code 构建什么。对于目前还未明确的开发者，我们提供了入门工具包。这些快速入门指南可帮助开发者了解问题的范围，并在几分钟之内开始构建与易于理解的用例相关的应用。



入门工具包

危机通信



入门工具包

远程教育



入门工具包

社区合作



入门工具包

水资源可持续性



入门工具包

能源可持续性



入门工具包

抗灾能力





developer.ibm.com/cn/callforcode/getstarted/covid-19/crisis-communication/

入门工具包

危机通信

通过这个入门工具包了解如何创建聊天机器人，帮助人们应对诸如新型冠状病毒 (COVID-19) 这样的大流行病。利用专家提供的工具和资源，开始快速构建您自己的聊天机器人解决方案。

查看教程



概述

这个问题是什么？

在疫情危机时期，由于人们都在尝试查找有关核酸检测、相关症状、社区响应和其他资源的基本信息，通信系统往往不堪重负。如果通信线路阻塞，那么真正需要帮助的人将无法拨通求救电话。而聊天机器人每天可以帮助回复数以万计甚至数十万条消息。

构想

受新冠病毒疫情的影响，广大民众开始寻找有关症状及核酸检测地点的信息，希望了解学校、交通和其他公共服务的当前状态。这个 Call for Code 入门工具包通过使用 Watson Assistant，设计了一种预先加载的虚拟助手，该助手能够理解和回答有关新冠病毒的常见问题，使用 Watson Discovery 扫描新冠病毒新闻报道，通过来自可靠来源的数据回答新冠病毒疫情的统计数据查询。

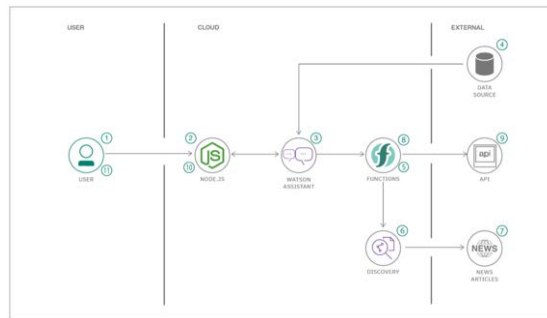
教程

创建危机通信聊天机器人并连接到新闻和 COVID-19 数据源

启用一个 Watson Assistant 聊天机器人，集成用于 Watson Discovery 和新冠病毒数据源的 Webhook。

🕒 预估时间: 40 分钟

查看教程



技术

IBM 技术

- IBM Watson Assistant
- Watson Discovery
- Watson Speech to Text
- Watson Text to Speech
- IBM Cloud Functions

开源技术

- Node.js
- IBM Watson Assistant
- Node-RED

数据

约翰斯-霍普金斯大学统计数据
covid19api



文档

聊天机器人操作指南



作者

此 COVID-19 入门工具包的创建者及其个人简介：

- Donna Byron – IBM
- John Walicki – IBM
- Matt Price – IBM



Crisis Communication

Technologies such as:

- Chatbots
- Chat integration
 - Voice / Slack / Web

can **alleviate panic** in communities & provide hygienic guidance



Remote Education

Technologies such as:

- Virtual classrooms
- Education Microservices
 - Transcription / Quiz app

can continue to **engage** students & create **interactive** experiences



Community Cooperation

Technology can address:

- Location data
- Supply chain data

to band communities **together & identify** those in most need of resources



Water sustainability

Technology can address:

- Weather data
- Water quality

through **data science** and
**HyperLocal weather
forecasting**



Energy sustainability

Technologies such as:

- AI
- IoT

can leverage **data** to
pinpoint & **reduce**
energy consumption



Disaster Resiliency

Technology can help us:

- Reduce toxic exposure
- Improve preparedness

by developing hardware
and software solutions with
machine learning
capabilities

Solving societal issues

Top 3 COVID-19 Solutions

The initial solutions that IBM will be supporting through deployment to take on COVID-19.

But the challenge does **not** stop! Continue to fight back with your solutions!

[Read about the solutions](#)

Safe Queue

USA

Social distancing is tough when queueing outside. The Safe Queue app places you in line virtually.



Are You Well?

INDIA

Detecting COVID-19 symptoms puts a lot of strain on an already-taxed medical system. Are You Well? empowers patients to self-assess and lets administrators see trends.



CovidImpact

CANADA | KAZAKHSTAN | BANGLADESH | MEXICO

Small businesses bear the brunt of an economic downturn after a crisis. CovidImpact provides AI-tailored assistance.



Previous Call for Code Winners

Call for Code 2019 Winner, Prometeo

A first of its kind, hardware-software solution equipped with sensors that detect toxicity levels for firefighters battling wildfires in real time, offering a transformative solution to first-responders globally

Technology: IBM Cloud IoT Platform, IBM Cloud services, Cloudant database

Call for Code 2018 Winner, Project Owl

A groundbreaking hardware-software solution that automatically constructs a mesh network via small Wi-Fi units allowing for sustained communications in peak times of need

Technology: IBM Watson Studio, IBM Cloud IoT Platform

Answer the call.



Participants:

Register for the challenge, and start building

Sponsors:

Show your full support with a sponsorship

COVID-19 Reference Materials:

We have the tools. You have the talent.

Call for Code, University Track:

Calling all students.

More information:

Find more details at developer.ibm.com/callforcode



Start coding



Build with open
tech



Find your squad



Submit your idea

2020 Call for Code Global Challenge Timeline

