ECCE APP CHALLENGE 2021

PURPOSE

The Esri Canada GIS Centres of Excellence (ECCE) App Challenge is an annual activity among students studying at higher education institutes that are members of the ECCE program. The purpose of the challenge is to engage teams of participating students at each center, with a maximum of four members per team, to work collaboratively on building a new app within one week using Esri technology, and other components as required.

OBJECTIVES

The primary objective of the challenge is, as the word suggests, ***to challenge students to use their technical GIS knowledge, creativity, and ability to innovate and work together to produce a relevant and functional app using the Esri platform.*** Realization of this objective will produce new apps that showcase the abilities of students studying at the centres of excellence.

A secondary objective is ***to contribute to building a strong sense of community among senior undergraduate and graduate students studying at Esri Canada GIS Centres of Excellence.*** Realization of this objective will allow students to 'see' beyond their own school into the broader landscape of GIScience in higher education across Canada.

THE CHALLENGE

Use **Canadian open spatial data**[1] to develop an app with Esri technology.

Crowd-sourced information that serves a specific purpose may also be used in your app, in addition to the open spatial data sources that you use.

THE CHALLENGE THEME

The app you create must be focused on a topic or issue that is related to **Reducing Inequalities**. This theme is based on one of the 17 goals for sustainable development set by the UN in 2015. You are encouraged to review this goal, and its associated targets outlined on the UN SDG website. Be sure to adapt this theme to a specific issue within Canada, and ensure that it is reflected effectively in the overall design and presentation of your app challenge project.

TERMS

The following terms apply to the App Challenge competition:

- Apps can be built on any aspect of the Esri platform, including Web, mobile, or desktop.
- Open source software components can be used in conjunction with Esri software components.
- **All apps must be tested and run on Canadian open spatial data**.
- All intellectual property (IP) associated with the developed apps resides with the developers, and pre-existing IP conditions hold for any commercial or open source components used.
- You have **one week** (i.e. 7 days) to complete your app from the start date and time that is announced to you.
- **At or prior to the 7-day deadline** (**5:00 pm local time, unless otherwise specified for your school**), your completed apps and all items noted in the deliverables section of this document must be uploaded to a private folder using a file hosting service (e.g., Dropbox, Google Drive, OneDrive). A link to

[1] Open spatial data refers to data accessed from an open data site, data accessed from a social media site according to conditions of use defined by the social media company, or any open geographic information services such as rest endpoints that Canadian government agencies have made available.

the folder must be emailed to Michael Leahy (mleahy@esri.ca) **by the final deadline.**
    - If your team uses a private repository on GitHub to maintain the source code for your project, you may choose to invite Michael Leahy's GitHub account (mgleahy) as a collaborator. Any files not included in the repository will still need to be delivered by the same deadline.
    - **Note:** Please do not publish applications, source code, or videos for your project to public repositories on GitHub or through public services like YouTube until April, when all ECCE schools have completed the App Challenge.
- You may obtain technical assistance from faculty/staff at your school, and you may contact Esri Canada higher education staff for support during the event:
    - Dr. Michael Leahy (mleahy@esri.ca)
    - Dr. Krista Amolins (kamolins@esri.ca)
    - Dr. Tasos Dardas (adardas@esri.ca)
    - Dr. Hossein Hosseini (hhosseini@esri.ca)
    - Michael Luubert (mluubert@esri.ca)
    - Jonathan Van Dusen (jvandusen@esri.ca)

- Review the resources provided to you through the ECCE Web site (http://ecce.esri.ca/). Specifically, you should **review the videos posted** on the App Challenge page, and the various items posted in the Resources page.
- If you have any other questions, please feel free to contact Michael Leahy (mleahy@esri.ca), or any of the five Esri Canada contacts noted above.
- **All code written and submitted for the apps will be made open source under the GNU General Public License v3.0** (https://www.gnu.org/licenses/gpl-3.0.en.html), and will be hosted via the ECCE GitHub repository (https://github.com/EsriCanada-CE/ecce-app-challenge-2021).
- Esri Canada retains the right to publicize the challenge and showcase the apps produced by the winner(s) through the ECCE Web site, through social media, and at regional user conferences.

JUDGING

There will be three judges for the competition. Their names will be announced after the event has concluded.

DECISION

The judges' decision will be final, and the decision will be conveyed to all participants and the Centre Directors by email before the end of April 2021. There will be a

simultaneous announcement posted on the ECCE Web site and in the following week a blog post will be published about the challenge and the winners through esri.ca. Standard social media will also be used to publicize the winners (Twitter, Facebook, etc.) and press releases issued from Esri Canada and each of the centres. There will be no feedback provided from the judges to participating groups.

PRIZE

The prize for the winning app is an expenses-paid trip for team members to the **Esri International User Conference in San Diego (July 12th-16th)**[2]. Students are required to make their own US visa arrangements if required. There will be no direct cash award to any participant.

DELIVERABLES

For your reference, a checklist has been included in the resources provided to your team prior to the start of the challenge. Please refer to this checklist at the start, and throughout the week that you work on your projects. Complete all items in the checklist to help ensure that you have all the deliverables specified below ready to submit at the end of the week.

On the first day of the challenge at your school:

Please submit the following to Michael Leahy (mleahy@esri.ca):

1. A name for your team
2. A photo of all your team members (either individually, or perhaps a creative combination of your individual photos in a single image)
3. Prepare a short bio for each team member.

These will be included in a team profile displayed in the ECCE GitHub webpage (https://esricanada-ce.github.io/) for this year's App Challenge.

To be delivered by 5:00 pm local time at the end of the week for the challenge at your ECCE to Michael Leahy (mleahy@esri.ca):

1. Mission statement for your app (i.e., a clear description of what your app seeks to achieve and why);
2. Statement of the characteristics of the app that make it appealing, interesting and useful (i.e., how does it help the end user);

[2] In the event that the Esri International User Conference is held as a virtual event for 2021, or that travel to the US remains restricted or is otherwise deemed unsafe by government agencies, Esri Canada may choose to provide alternative prizes for winning team members.

3. A video with voice over that promotes and demonstrates use of your app;
4. A well-structured readme file (in markdown format) suitable for GitHub that states the goals of your app and how to use it;
5. Organized code base suitable for upload to a GitHub code repository with all applicable instructions for downloading, compiling, and/or installation.

The judges for the competition will evaluate all apps based on the quality and completeness of the 5 deliverables mentioned above, as well as the following criteria:

6. The quality of the user experience provided by your app (i.e., it should have a well-structured UI and workflow)
7. The reliability of the application (i.e., it should error-free and should not crash during use)

All seven characteristics describe above are equally weighted in terms of importance.