

Lesson 20: Creating an App

45 minutes

Overview

This is the fifth of a five-day sequence of lessons that prepare students for the final project. In this lesson, students import the club recommender app into App Lab and begin customizing the app. Students add a welcome screen and update the descriptions of each feature, then they can decide how they would like to further customize the app. The steps students take in this lesson are identical to the steps students will take in their final project.

Question of the Day: How can I create a friendly, easy-to-use machine learning app?

Standards

Full Course Alignment

CSTA K-12 Computer Science Standards (2017)

- ▶ **AP** - Algorithms & Programming

Agenda

Warm Up (5 minutes)

Journal

Activity (35 minutes)

Wrap Up (5 minutes)

Journal

Objectives

Students will be able to:

- Create an app that uses machine learning

Preparation

- Check the "**Teacher's Lounge**" forum for verified teachers to find additional strategies or resources shared by fellow teachers

Links

Heads Up! Please make a copy of any documents you plan to share with students.

For the teachers

- **Creating an App** - Slides

▼ Make a Copy

Teaching Guide

Warm Up (5 minutes)

Journal

 **Prompt:** *Hawa is ready to start building her app! She wants it to look better than some of the single-screen, black-and-white apps she's seen. How can she design her app so it's friendly and easy to use?*

Discussion Goal: This prompt prepares students for the task they will complete today - designing an app from the data and model they prepared earlier in the week. Students should recall experiences from previous lessons. Some answers may include:

- Adding a theme

- Adding a welcome screen
- Expanding the feature text beyond the one or two word default labels
- Creating a new screen to show the result of the prediction

Remarks

This is a great list of ways to make an app friendly and easy to use! Today, we're going to help [team name] design and customize their apps using the model we prepared earlier this week.

 **Question of the Day:** How can I create a friendly, easy-to-use machine learning app?

Activity (35 minutes)

 **Code Studio:** Have students log into code studio. The next series of levels will have students import their model into App Lab, then begin to customize the app to make it easier to use.

Circulate: Monitor students as they complete the levels in Code Studio. Refer students to Help and Tips section if they need a refresher on App Lab's features.



1-3

Import Your Model

1

2

3



4-5

Add a Welcome Screen

4

5



6

Customize Your App



Teaching Tip



Supporting Students: These levels are similar to similar customizations students completed in previous lessons. If students get stuck, consider referring them to these previous lessons:

- Adding multiple screens for each feature: [Lesson 13 - Customizing Apps](#)
- Adding multiple screens for the resulting prediction: [Lesson 10 - Model Cards in App Lab](#)



7



Review Your App



Assessment Opportunity



This level can be used as a formative assessment. A rubric is provided in the level, and written feedback can be given to students. [Click here to learn more about giving feedback to students.](#)

Wrap Up (5 minutes)

Journal

 **Prompt:** *If you were to create your own machine learning app, what problem would you want it to try and solve?*

Discussion Goal: This prompt foreshadows how students will start their project tomorrow, where they will investigate their own problem to solve using a machine learning app. Treat this prompt like a brainstorm, letting students suggest ideas. Use this as a segue into the project tomorrow where students will decide an idea they would like to pursue.



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