Curriculum Outline

3.7.2020

TEALS End of Semester Project

OVERVIEW

The TEALS program aims to pair passionate high school teachers with talented engineers around the United States to help teach effective Computer Science Courses. Two AP courses, the AP Computer Science Principles, and AP Computer Science Applications courses, task students with completing their exams by mid-May. This leaves about 4-6 weeks until the end of the school year where educators attempt to find alternate curriculum to engage students.

We aim to provide an exciting alternative to the current end-of-year curriculum which allows students to combine Azure AI libraries with interactive animations, and game development, culminating in a self-led student project that integrates basic computer vision, voice recognition, and/or text analytics.

CURRICULUM OUTLINE

Week 1: Introduction to AI and Wick Editor

In this introductory week, students are introduced to some basic AI concepts through examples, and remixing their own projects in Wick Editor.

1. What is AI?
   A basic introduction to overall AI concepts.

2. What is Wick Editor?
   A short introduction to Wick Editor, the creation environment we'll be using.

3. AI in Wick Editor Projects.
   Analyzing a collection of examples that integrate AI with Wick Editor projects.

4. Creating Advanced Projects in Wick Editor.
   Learning about more complex Wick Editor features.

5. Taking a Look Inside.
   Remixing Wick Editor AI examples.

Week 2: Project Design
This week, students will begin creating design documents and tech demos that they will use to create their full projects.

1. Exploring Projects - AI for Good
   Learning about Microsoft's "AI for Good" Initiative for inspiration.

2. Project Design #1
   Brainstorming project ideas that combine AI, animations, and interactivity.

3. Project Design #2
   Creating storyboards and new project documents to refine our project ideas.

4. Making Tech Demos
   Creating basic demos that describe specific interactions in our projects.

5. Reviewing Tech Demos
   Conducting peer reviews of our tech demos.

Week 3: Project Implementation
This week, students will use their designs to create their full project ideas. Throughout the week, students will conduct peer reviews of their work.

1. Implementing Projects #1
   First full day of final project creation.

2. Implementing Projects #2
   Second full day of final project creation.

3. Implementing Projects #3
   Third full day of final project creation.

4. Reviewing Project Progress
   Students pause project development to review a classmate's work.

5. Implementing Projects #4
   Fourth full day of final project creation.

Week 4: Wrapping Up and Outreach Design

Students will finalize their project and design a small series of interviews and resources that will allow them to evaluate their project. Toward the end of the week, students will conduct an interactive show and tell!

1. Implementing Projects #5
   Last full day of final project creation.

2. Community Review #1
   Students will design a representative persona and model an interview for that persona.

3. Final Project Review
   Students will review their progress and conduct any final research and fixes.

4. Show and Tell #1
   Students will conduct an interactive show and tell where the class can play with their work.

5. Show and Tell #2 and Wrap Up
   Final students will present for show and tell and the class will wrap up the end of semester project.