College Tech Challenge from the Connecticut Tech Council
Lead Sponsor LearnToProgram.tv

Your team may choose one (and only one) of the challenges below to submit for round one of the College Tech Challenge Competition.

Challenge #1— Fit Connecticut

A healthy, fit population is a benefit to any state. According to the Robert Wood Johnson Foundation, Connecticut is the ninth fittest state in the country, with a 25% obesity rate. Connecticut is just ahead of New York, but behind nearby states Massachusetts and Vermont.

Your team is tasked with creating an app that identifies outdoor recreational opportunities within the state and encourages participation in recreation.

To start you may want to look at the Connecticut Open Data DEP Property Access data at https://data.ct.gov/dataset/DEP-Property-Access/sg4r-4tnv and Google Places Data at https://developers.google.com/places/.

Specific Requirements
1) Your app must meet all requirements listed in the general requirements document.
2) Opportunities listed in the app must be categorized for easy viewing.
3) Your app must have a geolocation component that shows opportunities on a map.
4) Your app must include some type of methodology of encouraging participation, such as badging and rewards.

Challenge #2— C'mon 'N Ride It (The Train)

Traffic in Connecticut can be challenging. The I-95 corridor which connects New York City to major East Coast population centers Providence and Boston is often a source of frustration for Connecticut commuters. The Metro North Commuter Railroad has been serving customers from New Haven to New York City for over a century.

Your team is tasked with creating an app that both informs travelers about conditions on I-95 and suggests train-based alternatives.

As you begin you may want to examine the Connecticut Travel Smart AP at https://cttravelsmart.org/developers/help and the Metro North API at http://web.mta.info/developers/.

Specific Requirements
1) Your app must meet all the requirements listed in the general requirements document.
2) Your app should include a way to list incidents on I-95 that may impeded travel and nearby train alternatives.
3) Your app should use geolocation to pinpoint user location and determine nearby Metro North Train alternatives.

Challenge #3— Education Connecticut!

Connecticut is a state that traditionally values education. With some of the top-rated school districts in the country, as well as some top universities, this is a state that prides itself on educational quality.

But that's only half the story. Connecticut is also the state with among the largest disparities between rich and poor districts. Top rated high schools, in some cases, are just a few miles from high schools set back by significant urban problems.

Education is an area where there is tremendous amounts of data. Your app should provide a visual illustration of Connecticut's educational system by showing several compelling, configurable data visualizations.

To get started you should look at the Connecticut Data Collaboratives educational data located at http://data.ctdata.org/data_by_topic#education. You should also examine a library that provides visualization tools such as D3 (https://github.com/d3/d3/wiki/Gallery)

Specific Requirements
1) Your app must meet all the requirements listed in the general requirements document.
2) Your app must provide at least three impactful visualizations.
3) One of the visualizations must include a geolocation aspect (ie map comparing districts in Connecticut)
4) Visualizations must be configurable based on some user input.

Note: API's suggested here may require a developer key— Please leave time in your development schedule to apply for and receive the necessary API keys. See the individual API documentation for more information.

Questions? Email Mark Lassoff at mark@learntoprogram.tv.