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Project Summary – Go Code Colorado Fall 2020
Velowood Chatbot that promotes Bicycle Riding

Objective:
Help people have enjoyable bicycle riding experiences by providing tailored public data by means of a chatbot located on a new website.

Executive Summary:
Velowood Cyclery is a bike shop with legendary reputation for service. Under new management, the shop would like to optimize their operations by automating simple tasks like recommendations for bike rides using public data. Using Dialogflow, Corky's Dev Shop LLC has trained a chatbot that ensures Velowood customer's bikes are ready to ride and then provides recommendations for where to ride based on variables such as bike type.

Overview:
Sustainable transport is something we should all be concerned with and often the people with the skills and knowledge of how to fix bicycles are impacted by the seasonality of the industry. This year, bike mechanics and bike shops are even more challenged to continue to compete in a global marketplace where ecommerce forces threaten their bottom line, yet customers still depend on their esoteric knowledge for how to fix such a wide variety of bicycles.

The Velowood Chat bot is designed with several intents, first to make sure the user's bicycle is ready to ride. Once the chatbot knows the bicycle is ready to ride, it will start providing information on great places to ride using public data.

The video demonstration is available at:
https://corkysdevshop.com/velowoodcyclery/Velowood_GoCode.mp4
The chatbot can be experimented with at:
https://corkysdevshop.com/velowoodcyclery/mockWebsite/v0.1.html

Data sets that were used in the chat bot are:
- https://data.colorado.gov/Recreation/Colorado-Bike-Maps/cuim-8saw
  - Coloradobikemaps.com
- https://data.colorado.gov/Recreation/Bicycle-Colorado/5phw-f3xw
  - Bicyclecolorado.org
- https://data.colorado.gov/Recreation/Points-Of-Interest-in-Denver-map/dqd2-3hbj
- https://data.colorado.gov/Recreation/Denver-Regional-Bicycle-Map/9haa-65ty
  - https://experience.arcgis.com/experience/961e7aa02ddf4c0b8ffc705bcc256ad4

Future Plans:
The prize money would be applied to purchasing a laptop for an off-season bike mechanic and train him to fix the website and continue to train the chat bot. The chat bot will then be able to gather more useful customer data to enhance service and improve decision making by the owner. This way the shop retains a good employee and improves their web presence.

Additional Ideas:

1. Use public data to do statistical analysis of customer segments. One analysis might propose the following hypothesis, which would be useful in targeting ads.

    a. Hypothesis: The most significant factor for active bike ownership is proximity to a biking trail.
    b. Null Hypothesis: There is no correlation between distance to bike trail and bike ownership.

    The analysis could try and tie customer needs to location data.

2. There are plenty other data sets to include in the chatbot, including recommendations based on variables like bike type the user inputs. For instance, if the user indicates they have a mountain bike, the bot can recommend maps to the Colorado Trail.