Welcome to the Virtual Grace Hopper Celebration 2020!

The pre-work details below are also mentioned in this Git repository: https://tinyurl.com/harp-ghc-2020

Workshop Topic

Sensor (LiDAR) To HD Maps For Driverless Cars: Visualize The Transformation In 3D

Understanding the steps involved in HD map-making and seeing them come alive by visualizing them using a 3D-map rendering engine is like hitting two targets with one arrow.

Walk away with visualization of LiDAR point-clouds collected by HERE cars, raw features extracted from LiDAR (Light Detection & Ranging) imagery and the final HD-map.

This will be achieved using an open-source 3D web-map rendering engine – harp.gl

Workshop Prerequisites

Install node and npm

Download and install Node on your machine: https://nodejs.org/en/download/ Use the latest LTS Version: 12.18.3

Checkout workshop repository

URL: https://tinyurl.com/harp-ghc-2020

Section 1: Initial App Setup

The initial app set up for all three steps has already been done for you. The workshop is divided into three steps under the folders:

1. point-clouds
2. intermediate
3. hdmap

You will be working off of the 'initial' folder during the workshop.

Register for a free HERE Account

Go to https://developer.here.com/sign-up?create=Freemium-Basic&keepState=true&step=account

1. Create an account using your details
2. Generate an app under the 'REST' section
3. Create an API Key
4. Replace the new api key in the file: ./apikey.ts

Section 2: Initial setup

npm install

Run this command in each of the three sub-folders mentioned below:

1. ./point-clouds/initial
2. ./intermediate/initial
3. ./hdmap/initial

Run the app

Go to ./point-clouds/initial folder and run the app using the command below:

```
npm start
```

You should be able to see a map as shown below: