In [4]:
```
import os
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
# %matplotlib inline
import scipy.stats
from scipy.stats import norm, binom, poisson
from dtaidistance import dtw

import json
```

Changing sun-altitude

- 3°
- 1°
- -1°
- -3°
- -5°

Layered folders, parse into 2d lists of dicts

In [5]:
```
import os

txt_lists = [[], [], [], [], []]

for root, dirs, files in os.walk("./Simulations_Sun_Alt/route_highway_epoch24_clear-3"):
    for file in files:
        if file.endswith(".txt"):
             with open(os.path.join(root, file), encoding = 'utf-8') as f:
                read_string = f.read()
                json_object = json.loads(read_string)
                txt_lists[0].append(json_object)

for root, dirs, files in os.walk("./Simulations_Sun_Alt/route_highway_epoch24_clear-1"):
    for file in files:
        if file.endswith(".txt"):
             with open(os.path.join(root, file), encoding = 'utf-8') as f:
                read_string = f.read()
                json_object = json.loads(read_string)
```

```
                txt_lists[1].append(json_object)

for root, dirs, files in os.walk("./Simulations_Sun_Alt/route_highway_epoch24_clear--1"):
    for file in files:
        if file.endswith(".txt"):
             with open(os.path.join(root, file), encoding = 'utf-8') as f:
                read_string = f.read()
                json_object = json.loads(read_string)
                txt_lists[2].append(json_object)

for root, dirs, files in os.walk("./Simulations_Sun_Alt/route_highway_epoch24_clear--3"):
    for file in files:
        if file.endswith(".txt"):
             with open(os.path.join(root, file), encoding = 'utf-8') as f:
                read_string = f.read()
                json_object = json.loads(read_string)
                txt_lists[3].append(json_object)

for root, dirs, files in os.walk("./Simulations_Sun_Alt/route_highway_epoch24_clear-night"):
    for file in files:
        if file.endswith(".txt"):
             with open(os.path.join(root, file), encoding = 'utf-8') as f:
                read_string = f.read()
                json_object = json.loads(read_string)
                txt_lists[4].append(json_object)
```

Examining results

In [7]:

```
count_array = []
for txt_list in txt_lists:
    count = 0
    for txt in txt_list:
        if txt['_checkpoint']['records'][0]['status'] == 'Completed':
            count += 1
    count_array.append(count/50)

print(count_array)
```

```
[1.0, 1.0, 1.0, 1.0, 1.0]
```

In [15]:

```
count_array = []
for txt_list in txt_lists:
    count = 0
    for txt in txt_list:
```

```
        if not txt['_checkpoint']['records'][0]['infractions']['outside_route_lanes']:
            count += 1
#         else:
#             print(txt_list.index(txt))
    count_array.append(count/50)

print(count_array)
```

```
[1.0, 1.0, 1.0, 0.98, 0.3]
```