Results per hazard

July 4, 2017

1 Analysis of the hazard data

1.1 Import and helper functions

In [1]:
```
import os
import codecs
import csv
from datetime import datetime
import numpy as np


# Read UTF-16 encoded unicode '.txt'. Usefull for cross-platform encoding.
def load(location):
    d = []
    f=codecs.open(location,"rb")
    csvread=csv.reader(f, delimiter=';')
    csvread.next()
    for row in csvread:
        d.append(row)

    # Filtering the data where Eye Tracking is not working
    return [line for line in d]

def convert_time(time):
    return datetime.strptime(time, '%M:%S,%f')

# Small script to load all the data from the folder
data = []
directory = os.path.join("c:\\","/media/sf_EyeTracking/results/hazards")
for root,dirs,files in os.walk(directory):
    print(str(len(files)) + " files found.")
    for file in files:
        if file.endswith(".csv"):
            data.extend(load("/media/sf_EyeTracking/results/hazards/"+file))
data = [line for line in data if line[0] != '']
print(str(len(data)) + " lines of file.")
```

```
        def per_hazard(tmp, value):
            per_hazard = [line for line in tmp if line[4] == value]
            return per_hazard

        def per_participant(tmp, participant):
            per_participant = [line for line in tmp if line[0] == participant]
            return per_participant
```

```
63 files found.
1992 lines of file.
```

1.2 Applying corrections and validating to the collected CSV data.

```
In [2]: # Correcting an error made in the file template.
        def correct_line(line):
            # For tryout1, 2nd hazard is 3CH and not 2CH.
            new_line = line
            if line[2] == '1' and line[3] == '2' and line[4] == '2CH':
                new_line[4] = '3CH'
            if line[16] == '7+':
                new_line[16] = '8'
            return new_line

        print("Correction done.")

        data = [correct_line(line) for line in data]
```

```
Correction done.
```

```
In [3]: # Validate the data by checking occurence order, or consistency between colums.
        def validate_line(line):
            # Verify that cross event is after first fixation, if one.
            seconds = convert_time(line[14]) - convert_time(line[6])
            if seconds.total_seconds() < 0:
                return False

            # Verify that there is no typo in cross event.
            seconds = convert_time(line[14]) - convert_time("5:00,0")
            if seconds.total_seconds() > 0:
                return False

            # Verify that there is no typo in first fixation.
            seconds = convert_time(line[6]) - convert_time("05:00,0")
            if seconds.total_seconds() > 0:
                return False

            # Verify that there fixation number is higher than detection number.
```

```
            if int(line[16]) < int(line[15]):
                return False

            # Verify that the number of fixations is the good one.
            return validate_fixations(line)


        def validate_fixations(line):
            nb = int(line[16]) + 7
            for i in range(7, nb):
                if line[i] == '0':
                    return False
            return True

        participant_values = list(set([line[0] for line in data if line[0] != '']))
        hazard_values = list(set([line[4] for line in data if line[4] != '']))

        def validate_data(tmp):
            for line in tmp:
                if validate_line(line) is False:
                    print(line)

            # Verifying the number of distinct hazards.
            if len(hazard_values) != 24:
                return False

            # Verifying the number of distinct participants.
            if len(participant_values) != 63:
                return False

            # Success case
            return "Data has been validated."

        validate_data(data)
```

Out[3]: 'Data has been validated.'

1.3 Pre-analysis of the hazards

```
In [4]: # Computing the fixation time percentage and time difference between first fixation and

        results = []

        for line in data:
            new_line = line
            time_advance = 0
            total_fixation = 0
```

```
            if (line[6] != '' and line[14] != ''):
                time_advance = convert_time(line[14]) - convert_time(line[6])
                for i in range(7,14):
                    if isinstance(line[i], basestring):
                        line[i] = line[i].replace(',','.')
                total_fixation = float(line[7]) + float(line[8]) + float(line[9]) + float(line[1
                time_advance = time_advance.total_seconds()

            percentage = 0
            if time_advance != 0:
                percentage = round(total_fixation / time_advance * 100,3)
            # Sometimes percentage can be over 100 due to the roundings, correct it.
            if percentage > 100:
                percentage = 100

            new_line.append(time_advance)
            new_line.append(percentage)
            results.append(new_line)
            new_line = []
```

```
In [5]: # Verifying if some strange results inside the new computations.
        for l in results:
            if l[18] < 0 or l[19] > 100 or l[19] < 0:
                print(l)
```

1.4 Results Generation

```
In [6]: def average(_list, index):
            average = 0
            for l in _list:
                average += float(l[index])
            return round(average / len(_list), 3)

        def std(_list, index):
            new_list = [l[index] for l in _list]
            arr = np.array(new_list).astype(np.float)
            return round(np.std(arr), 3)

        def stops(_list):
            return len([l for l in _list if l[15] < l[16]]) * 100 / len(_list)

        def analyse(tmp):
            yes = [line for line in tmp if line[5] == 'YES']
            no = [line for line in tmp if line[5] == 'NO']
            accuracy = len(yes) * 100 / (len(yes) + len(no))

            print("Analysis made on " + str(len(data)) + " lines")
```

```
            print("Number of hazards seen by the participants: " + str(len(yes)))
            print("Mean values:")
            print("1) Accuracy: " + str(accuracy) + " %")
            print("2) Average first fixation duration: " + str(average(yes, 7)))
            print("3) Average time of first fixation before hazard: " + str(average(yes, 18)))
            print("4) Average fixation percentage during hazard: " + str(average(yes, 19)) +" %"
            print("5) Average fixation number on hazard: " + str(average(yes, 16)))
            print("6) Average fixation number on hazard as detection: " + str(average(yes, 15)))
            print("7) Average percentage of stops on hazards while driving: " + str(stops(yes))
            print("Deviation values:")
            print("2) Standard deviation of first fixation duration: " + str(std(yes, 7)))
            print("3) Standard deviation of time of first fixation: " + str(std(yes, 18)))
            print("4) Standard deviation of fixation percentage during hazard: " + str(std(yes,
            print("5) Standard deviation for fixation number on hazard: " + str(std(yes, 16)))
            print("6) Standard deviation for fixation number on hazard as detection: " + str(std
            print("----------------------------------------")

            result = [accuracy, average(yes, 7), std(yes, 7), average(yes, 18), std(yes, 18), av
            result.extend([average(yes, 16), std(yes, 16), average(yes, 15), std(yes, 15), stops
            return result

        def analyse_participant(ID):
            tmp = [line for line in results if line[0] == ID]
            print("Participant " + str(ID) + " - " + str(len(tmp)) + " lines")
            analyse(tmp)

        for participant in participant_values:
            analyse_participant(participant)
```

```
Participant 56 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 29
Mean values:
1) Accuracy: 90 %
2) Average first fixation duration: 0.871
3) Average time of first fixation before hazard: 5.638
4) Average fixation percentage during hazard: 58.45 %
5) Average fixation number on hazard: 3.172
6) Average fixation number on hazard as detection: 2.69
7) Average percentage of stops on hazards while driving: 20 %
Deviation values:
2) Standard deviation of first fixation duration: 0.697
3) Standard deviation of time of first fixation: 3.555
4) Standard deviation of fixation percentage during hazard: 22.41 %
5) Standard deviation for fixation number on hazard: 1.84
6) Standard deviation for fixation number on hazard as detection: 1.342
----------------------------------------
Participant 54 - 32 lines
```

```
Analysis made on 1992 lines
Number of hazards seen by the participants: 30
Mean values:
1) Accuracy: 93 %
2) Average first fixation duration: 1.648
3) Average time of first fixation before hazard: 4.367
4) Average fixation percentage during hazard: 54.621 %
5) Average fixation number on hazard: 1.9
6) Average fixation number on hazard as detection: 1.833
7) Average percentage of stops on hazards while driving: 3 %
Deviation values:
2) Standard deviation of first fixation duration: 1.524
3) Standard deviation of time of first fixation: 2.24
4) Standard deviation of fixation percentage during hazard: 26.354 %
5) Standard deviation for fixation number on hazard: 1.469
6) Standard deviation for fixation number on hazard as detection: 1.368
----------------------------------------
Participant 42 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 29
Mean values:
1) Accuracy: 90 %
2) Average first fixation duration: 1.328
3) Average time of first fixation before hazard: 5.048
4) Average fixation percentage during hazard: 58.819 %
5) Average fixation number on hazard: 3.034
6) Average fixation number on hazard as detection: 2.655
7) Average percentage of stops on hazards while driving: 20 %
Deviation values:
2) Standard deviation of first fixation duration: 1.172
3) Standard deviation of time of first fixation: 2.446
4) Standard deviation of fixation percentage during hazard: 21.249 %
5) Standard deviation for fixation number on hazard: 1.884
6) Standard deviation for fixation number on hazard as detection: 1.603
----------------------------------------
Participant 43 - 24 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 19
Mean values:
1) Accuracy: 79 %
2) Average first fixation duration: 0.955
3) Average time of first fixation before hazard: 5.063
4) Average fixation percentage during hazard: 61.647 %
5) Average fixation number on hazard: 3.316
6) Average fixation number on hazard as detection: 3.316
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 0.812
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3) Standard deviation of time of first fixation: 2.17
4) Standard deviation of fixation percentage during hazard: 20.515 %
5) Standard deviation for fixation number on hazard: 1.489
6) Standard deviation for fixation number on hazard as detection: 1.489
---------------------------------------
Participant 60 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 26
Mean values:
1) Accuracy: 81 %
2) Average first fixation duration: 1.177
3) Average time of first fixation before hazard: 5.842
4) Average fixation percentage during hazard: 53.502 %
5) Average fixation number on hazard: 3.038
6) Average fixation number on hazard as detection: 1.923
7) Average percentage of stops on hazards while driving: 34 %
Deviation values:
2) Standard deviation of first fixation duration: 0.938
3) Standard deviation of time of first fixation: 3.192
4) Standard deviation of fixation percentage during hazard: 26.07 %
5) Standard deviation for fixation number on hazard: 1.72
6) Standard deviation for fixation number on hazard as detection: 0.917
---------------------------------------
Participant 61 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 24
Mean values:
1) Accuracy: 82 %
2) Average first fixation duration: 1.641
3) Average time of first fixation before hazard: 5.529
4) Average fixation percentage during hazard: 58.807 %
5) Average fixation number on hazard: 2.875
6) Average fixation number on hazard as detection: 2.125
7) Average percentage of stops on hazards while driving: 33 %
Deviation values:
2) Standard deviation of first fixation duration: 1.491
3) Standard deviation of time of first fixation: 3.052
4) Standard deviation of fixation percentage during hazard: 20.326 %
5) Standard deviation for fixation number on hazard: 1.74
6) Standard deviation for fixation number on hazard as detection: 1.013
---------------------------------------
Participant 62 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 29
Mean values:
1) Accuracy: 90 %
2) Average first fixation duration: 0.924
3) Average time of first fixation before hazard: 3.31
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4) Average fixation percentage during hazard: 56.984 %
5) Average fixation number on hazard: 2.379
6) Average fixation number on hazard as detection: 2.379
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 0.724
3) Standard deviation of time of first fixation: 1.771
4) Standard deviation of fixation percentage during hazard: 20.282 %
5) Standard deviation for fixation number on hazard: 1.4
6) Standard deviation for fixation number on hazard as detection: 1.4
---------------------------------------
Participant 63 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 28
Mean values:
1) Accuracy: 90 %
2) Average first fixation duration: 0.862
3) Average time of first fixation before hazard: 4.018
4) Average fixation percentage during hazard: 48.398 %
5) Average fixation number on hazard: 2.25
6) Average fixation number on hazard as detection: 2.179
7) Average percentage of stops on hazards while driving: 3 %
Deviation values:
2) Standard deviation of first fixation duration: 0.626
3) Standard deviation of time of first fixation: 1.775
4) Standard deviation of fixation percentage during hazard: 18.491 %
5) Standard deviation for fixation number on hazard: 1.022
6) Standard deviation for fixation number on hazard as detection: 0.966
---------------------------------------
Participant 64 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 28
Mean values:
1) Accuracy: 87 %
2) Average first fixation duration: 0.921
3) Average time of first fixation before hazard: 4.607
4) Average fixation percentage during hazard: 41.663 %
5) Average fixation number on hazard: 2.036
6) Average fixation number on hazard as detection: 1.857
7) Average percentage of stops on hazards while driving: 7 %
Deviation values:
2) Standard deviation of first fixation duration: 0.681
3) Standard deviation of time of first fixation: 2.403
4) Standard deviation of fixation percentage during hazard: 22.495 %
5) Standard deviation for fixation number on hazard: 1.18
6) Standard deviation for fixation number on hazard as detection: 0.833
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Participant 49 - 32 lines
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Analysis made on 1992 lines
Number of hazards seen by the participants: 28
Mean values:
1) Accuracy: 96 %
2) Average first fixation duration: 0.809
3) Average time of first fixation before hazard: 5.779
4) Average fixation percentage during hazard: 49.455 %
5) Average fixation number on hazard: 3.357
6) Average fixation number on hazard as detection: 2.643
7) Average percentage of stops on hazards while driving: 32 %
Deviation values:
2) Standard deviation of first fixation duration: 0.563
3) Standard deviation of time of first fixation: 3.094
4) Standard deviation of fixation percentage during hazard: 22.21 %
5) Standard deviation for fixation number on hazard: 1.836
6) Standard deviation for fixation number on hazard as detection: 1.231
----------------------------------------
Participant 66 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 32
Mean values:
1) Accuracy: 100 %
2) Average first fixation duration: 1.682
3) Average time of first fixation before hazard: 4.691
4) Average fixation percentage during hazard: 64.46 %
5) Average fixation number on hazard: 2.531
6) Average fixation number on hazard as detection: 2.531
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 1.432
3) Standard deviation of time of first fixation: 1.838
4) Standard deviation of fixation percentage during hazard: 21.661 %
5) Standard deviation for fixation number on hazard: 1.658
6) Standard deviation for fixation number on hazard as detection: 1.658
----------------------------------------
Participant 67 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 28
Mean values:
1) Accuracy: 87 %
2) Average first fixation duration: 1.356
3) Average time of first fixation before hazard: 5.621
4) Average fixation percentage during hazard: 48.651 %
5) Average fixation number on hazard: 2.536
6) Average fixation number on hazard as detection: 2.25
7) Average percentage of stops on hazards while driving: 21 %
Deviation values:
2) Standard deviation of first fixation duration: 0.842
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3) Standard deviation of time of first fixation: 2.805
4) Standard deviation of fixation percentage during hazard: 21.501 %
5) Standard deviation for fixation number on hazard: 1.401
6) Standard deviation for fixation number on hazard as detection: 1.214
---------------------------------------
Participant 68 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 31
Mean values:
1) Accuracy: 96 %
2) Average first fixation duration: 1.041
3) Average time of first fixation before hazard: 6.41
4) Average fixation percentage during hazard: 53.349 %
5) Average fixation number on hazard: 4.129
6) Average fixation number on hazard as detection: 2.484
7) Average percentage of stops on hazards while driving: 64 %
Deviation values:
2) Standard deviation of first fixation duration: 0.809
3) Standard deviation of time of first fixation: 2.686
4) Standard deviation of fixation percentage during hazard: 19.246 %
5) Standard deviation for fixation number on hazard: 2.012
6) Standard deviation for fixation number on hazard as detection: 1.292
---------------------------------------
Participant 69 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 26
Mean values:
1) Accuracy: 81 %
2) Average first fixation duration: 1.6
3) Average time of first fixation before hazard: 3.712
4) Average fixation percentage during hazard: 60.149 %
5) Average fixation number on hazard: 2.538
6) Average fixation number on hazard as detection: 2.154
7) Average percentage of stops on hazards while driving: 15 %
Deviation values:
2) Standard deviation of first fixation duration: 1.476
3) Standard deviation of time of first fixation: 2.03
4) Standard deviation of fixation percentage during hazard: 20.506 %
5) Standard deviation for fixation number on hazard: 1.447
6) Standard deviation for fixation number on hazard as detection: 1.133
---------------------------------------
Participant 52 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 25
Mean values:
1) Accuracy: 78 %
2) Average first fixation duration: 1.044
3) Average time of first fixation before hazard: 4.744
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4) Average fixation percentage during hazard: 54.813 %
5) Average fixation number on hazard: 2.88
6) Average fixation number on hazard as detection: 2.88
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 0.588
3) Standard deviation of time of first fixation: 1.939
4) Standard deviation of fixation percentage during hazard: 17.345 %
5) Standard deviation for fixation number on hazard: 1.243
6) Standard deviation for fixation number on hazard as detection: 1.243
---------------------------------------
Participant 24 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 26
Mean values:
1) Accuracy: 81 %
2) Average first fixation duration: 1.062
3) Average time of first fixation before hazard: 4.581
4) Average fixation percentage during hazard: 51.349 %
5) Average fixation number on hazard: 2.269
6) Average fixation number on hazard as detection: 2.269
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 0.801
3) Standard deviation of time of first fixation: 2.179
4) Standard deviation of fixation percentage during hazard: 21.176 %
5) Standard deviation for fixation number on hazard: 1.162
6) Standard deviation for fixation number on hazard as detection: 1.162
---------------------------------------
Participant 25 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 23
Mean values:
1) Accuracy: 71 %
2) Average first fixation duration: 0.763
3) Average time of first fixation before hazard: 9.987
4) Average fixation percentage during hazard: 39.74 %
5) Average fixation number on hazard: 2.565
6) Average fixation number on hazard as detection: 2.565
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 0.487
3) Standard deviation of time of first fixation: 24.553
4) Standard deviation of fixation percentage during hazard: 18.604 %
5) Standard deviation for fixation number on hazard: 1.21
6) Standard deviation for fixation number on hazard as detection: 1.21
---------------------------------------
Participant 27 - 32 lines
```

```
Analysis made on 1992 lines
Number of hazards seen by the participants: 27
Mean values:
1) Accuracy: 84 %
2) Average first fixation duration: 0.896
3) Average time of first fixation before hazard: 3.922
4) Average fixation percentage during hazard: 56.229 %
5) Average fixation number on hazard: 2.444
6) Average fixation number on hazard as detection: 2.407
7) Average percentage of stops on hazards while driving: 3 %
Deviation values:
2) Standard deviation of first fixation duration: 0.602
3) Standard deviation of time of first fixation: 2.428
4) Standard deviation of fixation percentage during hazard: 21.959 %
5) Standard deviation for fixation number on hazard: 1.315
6) Standard deviation for fixation number on hazard as detection: 1.284
----------------------------------------
Participant 20 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 21
Mean values:
1) Accuracy: 65 %
2) Average first fixation duration: 0.966
3) Average time of first fixation before hazard: 9.7
4) Average fixation percentage during hazard: 43.116 %
5) Average fixation number on hazard: 2.143
6) Average fixation number on hazard as detection: 2.143
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 0.742
3) Standard deviation of time of first fixation: 25.576
4) Standard deviation of fixation percentage during hazard: 19.992 %
5) Standard deviation for fixation number on hazard: 0.888
6) Standard deviation for fixation number on hazard as detection: 0.888
----------------------------------------
Participant 21 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 20
Mean values:
1) Accuracy: 80 %
2) Average first fixation duration: 1.145
3) Average time of first fixation before hazard: 3.525
4) Average fixation percentage during hazard: 56.858 %
5) Average fixation number on hazard: 2.0
6) Average fixation number on hazard as detection: 2.0
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 0.657
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3) Standard deviation of time of first fixation: 2.2
4) Standard deviation of fixation percentage during hazard: 18.819 %
5) Standard deviation for fixation number on hazard: 1.342
6) Standard deviation for fixation number on hazard as detection: 1.342
---------------------------------------
Participant 22 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 23
Mean values:
1) Accuracy: 92 %
2) Average first fixation duration: 1.235
3) Average time of first fixation before hazard: 5.552
4) Average fixation percentage during hazard: 57.446 %
5) Average fixation number on hazard: 2.783
6) Average fixation number on hazard as detection: 2.565
7) Average percentage of stops on hazards while driving: 17 %
Deviation values:
2) Standard deviation of first fixation duration: 1.237
3) Standard deviation of time of first fixation: 2.404
4) Standard deviation of fixation percentage during hazard: 23.946 %
5) Standard deviation for fixation number on hazard: 1.614
6) Standard deviation for fixation number on hazard as detection: 1.409
---------------------------------------
Participant 23 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 22
Mean values:
1) Accuracy: 68 %
2) Average first fixation duration: 1.065
3) Average time of first fixation before hazard: 4.25
4) Average fixation percentage during hazard: 54.224 %
5) Average fixation number on hazard: 2.682
6) Average fixation number on hazard as detection: 2.682
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 0.906
3) Standard deviation of time of first fixation: 1.59
4) Standard deviation of fixation percentage during hazard: 19.077 %
5) Standard deviation for fixation number on hazard: 1.394
6) Standard deviation for fixation number on hazard as detection: 1.394
---------------------------------------
Participant 46 - 24 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 23
Mean values:
1) Accuracy: 95 %
2) Average first fixation duration: 1.267
3) Average time of first fixation before hazard: 4.783
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4) Average fixation percentage during hazard: 61.39 %
5) Average fixation number on hazard: 2.783
6) Average fixation number on hazard as detection: 2.478
7) Average percentage of stops on hazards while driving: 21 %
Deviation values:
2) Standard deviation of first fixation duration: 1.819
3) Standard deviation of time of first fixation: 2.407
4) Standard deviation of fixation percentage during hazard: 21.638 %
5) Standard deviation for fixation number on hazard: 1.693
6) Standard deviation for fixation number on hazard as detection: 1.314
---------------------------------------
Participant 47 - 24 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 23
Mean values:
1) Accuracy: 95 %
2) Average first fixation duration: 1.108
3) Average time of first fixation before hazard: 4.183
4) Average fixation percentage during hazard: 56.908 %
5) Average fixation number on hazard: 2.348
6) Average fixation number on hazard as detection: 2.087
7) Average percentage of stops on hazards while driving: 8 %
Deviation values:
2) Standard deviation of first fixation duration: 0.826
3) Standard deviation of time of first fixation: 2.048
4) Standard deviation of fixation percentage during hazard: 27.688 %
5) Standard deviation for fixation number on hazard: 1.088
6) Standard deviation for fixation number on hazard as detection: 1.018
---------------------------------------
Participant 44 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 20
Mean values:
1) Accuracy: 100 %
2) Average first fixation duration: 0.732
3) Average time of first fixation before hazard: 6.855
4) Average fixation percentage during hazard: 47.816 %
5) Average fixation number on hazard: 4.4
6) Average fixation number on hazard as detection: 4.1
7) Average percentage of stops on hazards while driving: 15 %
Deviation values:
2) Standard deviation of first fixation duration: 0.647
3) Standard deviation of time of first fixation: 2.212
4) Standard deviation of fixation percentage during hazard: 21.092 %
5) Standard deviation for fixation number on hazard: 1.772
6) Standard deviation for fixation number on hazard as detection: 1.729
---------------------------------------
Participant 45 - 32 lines
```

```
Analysis made on 1992 lines
Number of hazards seen by the participants: 20
Mean values:
1) Accuracy: 83 %
2) Average first fixation duration: 1.133
3) Average time of first fixation before hazard: 4.36
4) Average fixation percentage during hazard: 59.998 %
5) Average fixation number on hazard: 3.05
6) Average fixation number on hazard as detection: 2.95
7) Average percentage of stops on hazards while driving: 10 %
Deviation values:
2) Standard deviation of first fixation duration: 0.843
3) Standard deviation of time of first fixation: 1.817
4) Standard deviation of fixation percentage during hazard: 20.946 %
5) Standard deviation for fixation number on hazard: 1.499
6) Standard deviation for fixation number on hazard as detection: 1.431
---------------------------------------
Participant 28 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 26
Mean values:
1) Accuracy: 81 %
2) Average first fixation duration: 1.351
3) Average time of first fixation before hazard: 4.215
4) Average fixation percentage during hazard: 45.656 %
5) Average fixation number on hazard: 1.731
6) Average fixation number on hazard as detection: 1.731
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 1.079
3) Standard deviation of time of first fixation: 2.14
4) Standard deviation of fixation percentage during hazard: 20.66 %
5) Standard deviation for fixation number on hazard: 0.983
6) Standard deviation for fixation number on hazard as detection: 0.983
---------------------------------------
Participant 29 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 25
Mean values:
1) Accuracy: 78 %
2) Average first fixation duration: 1.459
3) Average time of first fixation before hazard: 4.84
4) Average fixation percentage during hazard: 57.639 %
5) Average fixation number on hazard: 1.88
6) Average fixation number on hazard as detection: 1.88
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 0.975
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3) Standard deviation of time of first fixation: 2.27
4) Standard deviation of fixation percentage during hazard: 19.217 %
5) Standard deviation for fixation number on hazard: 0.652
6) Standard deviation for fixation number on hazard as detection: 0.652
---------------------------------------
Participant 40 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 31
Mean values:
1) Accuracy: 96 %
2) Average first fixation duration: 1.07
3) Average time of first fixation before hazard: 5.994
4) Average fixation percentage during hazard: 55.918 %
5) Average fixation number on hazard: 3.677
6) Average fixation number on hazard as detection: 2.839
7) Average percentage of stops on hazards while driving: 41 %
Deviation values:
2) Standard deviation of first fixation duration: 1.362
3) Standard deviation of time of first fixation: 2.887
4) Standard deviation of fixation percentage during hazard: 17.514 %
5) Standard deviation for fixation number on hazard: 1.856
6) Standard deviation for fixation number on hazard as detection: 1.505
---------------------------------------
Participant 41 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 26
Mean values:
1) Accuracy: 81 %
2) Average first fixation duration: 0.987
3) Average time of first fixation before hazard: 3.765
4) Average fixation percentage during hazard: 47.398 %
5) Average fixation number on hazard: 1.962
6) Average fixation number on hazard as detection: 1.962
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 0.82
3) Standard deviation of time of first fixation: 2.329
4) Standard deviation of fixation percentage during hazard: 20.249 %
5) Standard deviation for fixation number on hazard: 0.854
6) Standard deviation for fixation number on hazard as detection: 0.854
---------------------------------------
Participant 2 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 26
Mean values:
1) Accuracy: 81 %
2) Average first fixation duration: 1.557
3) Average time of first fixation before hazard: 5.888
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4) Average fixation percentage during hazard: 52.467 %
5) Average fixation number on hazard: 2.654
6) Average fixation number on hazard as detection: 2.269
7) Average percentage of stops on hazards while driving: 15 %
Deviation values:
2) Standard deviation of first fixation duration: 1.183
3) Standard deviation of time of first fixation: 3.259
4) Standard deviation of fixation percentage during hazard: 21.641 %
5) Standard deviation for fixation number on hazard: 1.753
6) Standard deviation for fixation number on hazard as detection: 1.317
---------------------------------------
Participant 5 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 28
Mean values:
1) Accuracy: 93 %
2) Average first fixation duration: 1.449
3) Average time of first fixation before hazard: 5.232
4) Average fixation percentage during hazard: 57.718 %
5) Average fixation number on hazard: 2.75
6) Average fixation number on hazard as detection: 2.536
7) Average percentage of stops on hazards while driving: 14 %
Deviation values:
2) Standard deviation of first fixation duration: 1.522
3) Standard deviation of time of first fixation: 2.937
4) Standard deviation of fixation percentage during hazard: 25.363 %
5) Standard deviation for fixation number on hazard: 1.573
6) Standard deviation for fixation number on hazard as detection: 1.349
---------------------------------------
Participant 4 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 25
Mean values:
1) Accuracy: 78 %
2) Average first fixation duration: 1.415
3) Average time of first fixation before hazard: 5.528
4) Average fixation percentage during hazard: 49.795 %
5) Average fixation number on hazard: 2.96
6) Average fixation number on hazard as detection: 2.44
7) Average percentage of stops on hazards while driving: 24 %
Deviation values:
2) Standard deviation of first fixation duration: 1.033
3) Standard deviation of time of first fixation: 2.595
4) Standard deviation of fixation percentage during hazard: 22.162 %
5) Standard deviation for fixation number on hazard: 1.509
6) Standard deviation for fixation number on hazard as detection: 1.235
---------------------------------------
Participant 7 - 32 lines
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Analysis made on 1992 lines
Number of hazards seen by the participants: 27
Mean values:
1) Accuracy: 84 %
2) Average first fixation duration: 0.992
3) Average time of first fixation before hazard: 5.53
4) Average fixation percentage during hazard: 48.226 %
5) Average fixation number on hazard: 3.037
6) Average fixation number on hazard as detection: 3.0
7) Average percentage of stops on hazards while driving: 3 %
Deviation values:
2) Standard deviation of first fixation duration: 0.649
3) Standard deviation of time of first fixation: 2.817
4) Standard deviation of fixation percentage during hazard: 18.709 %
5) Standard deviation for fixation number on hazard: 1.644
6) Standard deviation for fixation number on hazard as detection: 1.61
---------------------------------------
Participant 6 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 31
Mean values:
1) Accuracy: 96 %
2) Average first fixation duration: 1.39
3) Average time of first fixation before hazard: 5.829
4) Average fixation percentage during hazard: 58.238 %
5) Average fixation number on hazard: 3.097
6) Average fixation number on hazard as detection: 2.581
7) Average percentage of stops on hazards while driving: 19 %
Deviation values:
2) Standard deviation of first fixation duration: 1.416
3) Standard deviation of time of first fixation: 3.267
4) Standard deviation of fixation percentage during hazard: 24.992 %
5) Standard deviation for fixation number on hazard: 1.711
6) Standard deviation for fixation number on hazard as detection: 1.498
---------------------------------------
Participant 9 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 25
Mean values:
1) Accuracy: 78 %
2) Average first fixation duration: 0.99
3) Average time of first fixation before hazard: 4.02
4) Average fixation percentage during hazard: 52.368 %
5) Average fixation number on hazard: 2.92
6) Average fixation number on hazard as detection: 2.84
7) Average percentage of stops on hazards while driving: 4 %
Deviation values:
2) Standard deviation of first fixation duration: 0.79
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3) Standard deviation of time of first fixation: 1.738
4) Standard deviation of fixation percentage during hazard: 19.745 %
5) Standard deviation for fixation number on hazard: 1.354
6) Standard deviation for fixation number on hazard as detection: 1.405
---------------------------------------
Participant 8 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 27
Mean values:
1) Accuracy: 84 %
2) Average first fixation duration: 0.875
3) Average time of first fixation before hazard: 5.493
4) Average fixation percentage during hazard: 55.498 %
5) Average fixation number on hazard: 3.63
6) Average fixation number on hazard as detection: 3.259
7) Average percentage of stops on hazards while driving: 14 %
Deviation values:
2) Standard deviation of first fixation duration: 0.638
3) Standard deviation of time of first fixation: 2.573
4) Standard deviation of fixation percentage during hazard: 19.164 %
5) Standard deviation for fixation number on hazard: 1.808
6) Standard deviation for fixation number on hazard as detection: 1.817
---------------------------------------
Participant 39 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 28
Mean values:
1) Accuracy: 87 %
2) Average first fixation duration: 1.083
3) Average time of first fixation before hazard: 4.668
4) Average fixation percentage during hazard: 51.011 %
5) Average fixation number on hazard: 2.5
6) Average fixation number on hazard as detection: 2.5
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 0.859
3) Standard deviation of time of first fixation: 2.578
4) Standard deviation of fixation percentage during hazard: 18.786 %
5) Standard deviation for fixation number on hazard: 1.052
6) Standard deviation for fixation number on hazard as detection: 1.052
---------------------------------------
Participant 65 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 30
Mean values:
1) Accuracy: 93 %
2) Average first fixation duration: 1.307
3) Average time of first fixation before hazard: 6.407
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4) Average fixation percentage during hazard: 53.034 %
5) Average fixation number on hazard: 2.9
6) Average fixation number on hazard as detection: 2.733
7) Average percentage of stops on hazards while driving: 10 %
Deviation values:
2) Standard deviation of first fixation duration: 0.981
3) Standard deviation of time of first fixation: 4.039
4) Standard deviation of fixation percentage during hazard: 20.536 %
5) Standard deviation for fixation number on hazard: 1.491
6) Standard deviation for fixation number on hazard as detection: 1.459
---------------------------------------
Participant 38 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 27
Mean values:
1) Accuracy: 84 %
2) Average first fixation duration: 1.665
3) Average time of first fixation before hazard: 5.5
4) Average fixation percentage during hazard: 52.367 %
5) Average fixation number on hazard: 2.63
6) Average fixation number on hazard as detection: 2.37
7) Average percentage of stops on hazards while driving: 14 %
Deviation values:
2) Standard deviation of first fixation duration: 1.467
3) Standard deviation of time of first fixation: 2.628
4) Standard deviation of fixation percentage during hazard: 22.613 %
5) Standard deviation for fixation number on hazard: 1.567
6) Standard deviation for fixation number on hazard as detection: 1.418
---------------------------------------
Participant 71 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 28
Mean values:
1) Accuracy: 87 %
2) Average first fixation duration: 1.005
3) Average time of first fixation before hazard: 5.05
4) Average fixation percentage during hazard: 50.603 %
5) Average fixation number on hazard: 3.0
6) Average fixation number on hazard as detection: 2.893
7) Average percentage of stops on hazards while driving: 7 %
Deviation values:
2) Standard deviation of first fixation duration: 0.778
3) Standard deviation of time of first fixation: 2.771
4) Standard deviation of fixation percentage during hazard: 21.43 %
5) Standard deviation for fixation number on hazard: 1.535
6) Standard deviation for fixation number on hazard as detection: 1.543
---------------------------------------
Participant 70 - 32 lines
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Analysis made on 1992 lines
Number of hazards seen by the participants: 24
Mean values:
1) Accuracy: 75 %
2) Average first fixation duration: 0.888
3) Average time of first fixation before hazard: 4.467
4) Average fixation percentage during hazard: 37.113 %
5) Average fixation number on hazard: 2.583
6) Average fixation number on hazard as detection: 2.583
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 0.734
3) Standard deviation of time of first fixation: 2.018
4) Standard deviation of fixation percentage during hazard: 17.792 %
5) Standard deviation for fixation number on hazard: 1.47
6) Standard deviation for fixation number on hazard as detection: 1.47
----------------------------------------
Participant 59 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 29
Mean values:
1) Accuracy: 90 %
2) Average first fixation duration: 1.025
3) Average time of first fixation before hazard: 4.645
4) Average fixation percentage during hazard: 51.061 %
5) Average fixation number on hazard: 2.586
6) Average fixation number on hazard as detection: 2.586
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 0.988
3) Standard deviation of time of first fixation: 3.377
4) Standard deviation of fixation percentage during hazard: 20.086 %
5) Standard deviation for fixation number on hazard: 1.474
6) Standard deviation for fixation number on hazard as detection: 1.474
----------------------------------------
Participant 58 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 29
Mean values:
1) Accuracy: 90 %
2) Average first fixation duration: 1.017
3) Average time of first fixation before hazard: 4.807
4) Average fixation percentage during hazard: 58.969 %
5) Average fixation number on hazard: 3.31
6) Average fixation number on hazard as detection: 2.862
7) Average percentage of stops on hazards while driving: 17 %
Deviation values:
2) Standard deviation of first fixation duration: 0.993
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3) Standard deviation of time of first fixation: 3.375
4) Standard deviation of fixation percentage during hazard: 21.826 %
5) Standard deviation for fixation number on hazard: 1.578
6) Standard deviation for fixation number on hazard as detection: 1.224
---------------------------------------
Participant 11 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 19
Mean values:
1) Accuracy: 79 %
2) Average first fixation duration: 1.545
3) Average time of first fixation before hazard: 5.616
4) Average fixation percentage during hazard: 59.91 %
5) Average fixation number on hazard: 3.211
6) Average fixation number on hazard as detection: 3.105
7) Average percentage of stops on hazards while driving: 5 %
Deviation values:
2) Standard deviation of first fixation duration: 1.448
3) Standard deviation of time of first fixation: 2.809
4) Standard deviation of fixation percentage during hazard: 17.612 %
5) Standard deviation for fixation number on hazard: 1.436
6) Standard deviation for fixation number on hazard as detection: 1.447
---------------------------------------
Participant 13 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 29
Mean values:
1) Accuracy: 90 %
2) Average first fixation duration: 0.968
3) Average time of first fixation before hazard: 9.469
4) Average fixation percentage during hazard: 52.312 %
5) Average fixation number on hazard: 3.207
6) Average fixation number on hazard as detection: 3.0
7) Average percentage of stops on hazards while driving: 6 %
Deviation values:
2) Standard deviation of first fixation duration: 0.804
3) Standard deviation of time of first fixation: 22.378
4) Standard deviation of fixation percentage during hazard: 17.96 %
5) Standard deviation for fixation number on hazard: 1.606
6) Standard deviation for fixation number on hazard as detection: 1.438
---------------------------------------
Participant 12 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 29
Mean values:
1) Accuracy: 90 %
2) Average first fixation duration: 0.88
3) Average time of first fixation before hazard: 6.255
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4) Average fixation percentage during hazard: 57.13 %
5) Average fixation number on hazard: 2.793
6) Average fixation number on hazard as detection: 2.759
7) Average percentage of stops on hazards while driving: 3 %
Deviation values:
2) Standard deviation of first fixation duration: 0.516
3) Standard deviation of time of first fixation: 11.599
4) Standard deviation of fixation percentage during hazard: 21.239 %
5) Standard deviation for fixation number on hazard: 1.447
6) Standard deviation for fixation number on hazard as detection: 1.454
---------------------------------------
Participant 15 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 32
Mean values:
1) Accuracy: 100 %
2) Average first fixation duration: 1.569
3) Average time of first fixation before hazard: 4.694
4) Average fixation percentage during hazard: 60.472 %
5) Average fixation number on hazard: 2.5
6) Average fixation number on hazard as detection: 2.438
7) Average percentage of stops on hazards while driving: 3 %
Deviation values:
2) Standard deviation of first fixation duration: 1.41
3) Standard deviation of time of first fixation: 2.126
4) Standard deviation of fixation percentage during hazard: 20.646 %
5) Standard deviation for fixation number on hazard: 1.299
6) Standard deviation for fixation number on hazard as detection: 1.223
---------------------------------------
Participant 14 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 25
Mean values:
1) Accuracy: 78 %
2) Average first fixation duration: 1.088
3) Average time of first fixation before hazard: 3.688
4) Average fixation percentage during hazard: 59.494 %
5) Average fixation number on hazard: 2.08
6) Average fixation number on hazard as detection: 2.08
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 0.749
3) Standard deviation of time of first fixation: 1.752
4) Standard deviation of fixation percentage during hazard: 17.353 %
5) Standard deviation for fixation number on hazard: 1.093
6) Standard deviation for fixation number on hazard as detection: 1.093
---------------------------------------
Participant 17 - 32 lines
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Analysis made on 1992 lines
Number of hazards seen by the participants: 26
Mean values:
1) Accuracy: 81 %
2) Average first fixation duration: 1.207
3) Average time of first fixation before hazard: 4.119
4) Average fixation percentage during hazard: 53.061 %
5) Average fixation number on hazard: 2.0
6) Average fixation number on hazard as detection: 2.0
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 0.947
3) Standard deviation of time of first fixation: 1.39
4) Standard deviation of fixation percentage during hazard: 25.407 %
5) Standard deviation for fixation number on hazard: 0.92
6) Standard deviation for fixation number on hazard as detection: 0.92
----------------------------------------
Participant 16 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 28
Mean values:
1) Accuracy: 87 %
2) Average first fixation duration: 1.651
3) Average time of first fixation before hazard: 6.5
4) Average fixation percentage during hazard: 61.265 %
5) Average fixation number on hazard: 3.393
6) Average fixation number on hazard as detection: 2.857
7) Average percentage of stops on hazards while driving: 32 %
Deviation values:
2) Standard deviation of first fixation duration: 1.31
3) Standard deviation of time of first fixation: 3.022
4) Standard deviation of fixation percentage during hazard: 16.795 %
5) Standard deviation for fixation number on hazard: 1.739
6) Standard deviation for fixation number on hazard as detection: 1.457
----------------------------------------
Participant 33 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 28
Mean values:
1) Accuracy: 87 %
2) Average first fixation duration: 1.463
3) Average time of first fixation before hazard: 4.029
4) Average fixation percentage during hazard: 70.963 %
5) Average fixation number on hazard: 1.786
6) Average fixation number on hazard as detection: 1.786
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 1.062
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3) Standard deviation of time of first fixation: 2.252
4) Standard deviation of fixation percentage during hazard: 23.494 %
5) Standard deviation for fixation number on hazard: 0.939
6) Standard deviation for fixation number on hazard as detection: 0.939
---------------------------------------
Participant 18 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 26
Mean values:
1) Accuracy: 81 %
2) Average first fixation duration: 0.935
3) Average time of first fixation before hazard: 7.081
4) Average fixation percentage during hazard: 49.689 %
5) Average fixation number on hazard: 3.308
6) Average fixation number on hazard as detection: 2.769
7) Average percentage of stops on hazards while driving: 19 %
Deviation values:
2) Standard deviation of first fixation duration: 0.596
3) Standard deviation of time of first fixation: 5.888
4) Standard deviation of fixation percentage during hazard: 21.419 %
5) Standard deviation for fixation number on hazard: 1.814
6) Standard deviation for fixation number on hazard as detection: 1.31
---------------------------------------
Participant 31 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 27
Mean values:
1) Accuracy: 84 %
2) Average first fixation duration: 1.729
3) Average time of first fixation before hazard: 5.948
4) Average fixation percentage during hazard: 47.355 %
5) Average fixation number on hazard: 2.222
6) Average fixation number on hazard as detection: 1.889
7) Average percentage of stops on hazards while driving: 14 %
Deviation values:
2) Standard deviation of first fixation duration: 1.763
3) Standard deviation of time of first fixation: 2.721
4) Standard deviation of fixation percentage during hazard: 22.343 %
5) Standard deviation for fixation number on hazard: 1.227
6) Standard deviation for fixation number on hazard as detection: 0.831
---------------------------------------
Participant 30 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 30
Mean values:
1) Accuracy: 93 %
2) Average first fixation duration: 0.981
3) Average time of first fixation before hazard: 6.22
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4) Average fixation percentage during hazard: 47.998 %
5) Average fixation number on hazard: 3.233
6) Average fixation number on hazard as detection: 2.633
7) Average percentage of stops on hazards while driving: 23 %
Deviation values:
2) Standard deviation of first fixation duration: 1.021
3) Standard deviation of time of first fixation: 3.569
4) Standard deviation of fixation percentage during hazard: 21.004 %
5) Standard deviation for fixation number on hazard: 2.14
6) Standard deviation for fixation number on hazard as detection: 1.683
---------------------------------------
Participant 51 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 28
Mean values:
1) Accuracy: 87 %
2) Average first fixation duration: 1.253
3) Average time of first fixation before hazard: 4.071
4) Average fixation percentage during hazard: 62.714 %
5) Average fixation number on hazard: 2.536
6) Average fixation number on hazard as detection: 2.536
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 0.79
3) Standard deviation of time of first fixation: 1.742
4) Standard deviation of fixation percentage during hazard: 23.913 %
5) Standard deviation for fixation number on hazard: 1.592
6) Standard deviation for fixation number on hazard as detection: 1.592
---------------------------------------
Participant 36 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 28
Mean values:
1) Accuracy: 87 %
2) Average first fixation duration: 0.871
3) Average time of first fixation before hazard: 5.211
4) Average fixation percentage during hazard: 49.538 %
5) Average fixation number on hazard: 3.464
6) Average fixation number on hazard as detection: 2.893
7) Average percentage of stops on hazards while driving: 28 %
Deviation values:
2) Standard deviation of first fixation duration: 0.753
3) Standard deviation of time of first fixation: 2.576
4) Standard deviation of fixation percentage during hazard: 17.546 %
5) Standard deviation for fixation number on hazard: 1.721
6) Standard deviation for fixation number on hazard as detection: 1.52
---------------------------------------
Participant 53 - 32 lines
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Analysis made on 1992 lines
Number of hazards seen by the participants: 27
Mean values:
1) Accuracy: 84 %
2) Average first fixation duration: 0.771
3) Average time of first fixation before hazard: 4.019
4) Average fixation percentage during hazard: 54.61 %
5) Average fixation number on hazard: 2.889
6) Average fixation number on hazard as detection: 2.889
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 0.622
3) Standard deviation of time of first fixation: 2.032
4) Standard deviation of fixation percentage during hazard: 17.914 %
5) Standard deviation for fixation number on hazard: 1.663
6) Standard deviation for fixation number on hazard as detection: 1.663
----------------------------------------
Participant 34 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 29
Mean values:
1) Accuracy: 90 %
2) Average first fixation duration: 0.755
3) Average time of first fixation before hazard: 6.755
4) Average fixation percentage during hazard: 36.033 %
5) Average fixation number on hazard: 3.621
6) Average fixation number on hazard as detection: 3.069
7) Average percentage of stops on hazards while driving: 31 %
Deviation values:
2) Standard deviation of first fixation duration: 0.723
3) Standard deviation of time of first fixation: 3.399
4) Standard deviation of fixation percentage during hazard: 17.434 %
5) Standard deviation for fixation number on hazard: 1.75
6) Standard deviation for fixation number on hazard as detection: 1.337
----------------------------------------
Participant 55 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 22
Mean values:
1) Accuracy: 68 %
2) Average first fixation duration: 1.233
3) Average time of first fixation before hazard: 4.264
4) Average fixation percentage during hazard: 53.369 %
5) Average fixation number on hazard: 2.091
6) Average fixation number on hazard as detection: 2.091
7) Average percentage of stops on hazards while driving: 0 %
Deviation values:
2) Standard deviation of first fixation duration: 1.08
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3) Standard deviation of time of first fixation: 1.864
4) Standard deviation of fixation percentage during hazard: 21.402 %
5) Standard deviation for fixation number on hazard: 1.203
6) Standard deviation for fixation number on hazard as detection: 1.203
---------------------------------------
Participant 48 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 27
Mean values:
1) Accuracy: 84 %
2) Average first fixation duration: 1.558
3) Average time of first fixation before hazard: 4.904
4) Average fixation percentage during hazard: 60.807 %
5) Average fixation number on hazard: 2.704
6) Average fixation number on hazard as detection: 2.63
7) Average percentage of stops on hazards while driving: 7 %
Deviation values:
2) Standard deviation of first fixation duration: 1.32
3) Standard deviation of time of first fixation: 1.95
4) Standard deviation of fixation percentage during hazard: 22.836 %
5) Standard deviation for fixation number on hazard: 1.559
6) Standard deviation for fixation number on hazard as detection: 1.519
---------------------------------------
Participant 57 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 31
Mean values:
1) Accuracy: 96 %
2) Average first fixation duration: 1.978
3) Average time of first fixation before hazard: 5.687
4) Average fixation percentage during hazard: 57.049 %
5) Average fixation number on hazard: 1.935
6) Average fixation number on hazard as detection: 1.806
7) Average percentage of stops on hazards while driving: 9 %
Deviation values:
2) Standard deviation of first fixation duration: 1.551
3) Standard deviation of time of first fixation: 2.603
4) Standard deviation of fixation percentage during hazard: 17.893 %
5) Standard deviation for fixation number on hazard: 0.948
6) Standard deviation for fixation number on hazard as detection: 0.93
---------------------------------------
Participant 50 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 26
Mean values:
1) Accuracy: 81 %
2) Average first fixation duration: 1.213
3) Average time of first fixation before hazard: 5.131
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4) Average fixation percentage during hazard: 56.383 %
5) Average fixation number on hazard: 2.654
6) Average fixation number on hazard as detection: 2.308
7) Average percentage of stops on hazards while driving: 15 %
Deviation values:
2) Standard deviation of first fixation duration: 1.049
3) Standard deviation of time of first fixation: 2.5
4) Standard deviation of fixation percentage during hazard: 23.185 %
5) Standard deviation for fixation number on hazard: 1.663
6) Standard deviation for fixation number on hazard as detection: 1.563
----------------------------------------
```

```
In [7]: analyse(results)
        analyse_participant('30')

Analysis made on 1992 lines
Number of hazards seen by the participants: 1669
Mean values:
1) Accuracy: 85 %
2) Average first fixation duration: 1.187
3) Average time of first fixation before hazard: 5.264
4) Average fixation percentage during hazard: 53.92 %
5) Average fixation number on hazard: 2.747
6) Average fixation number on hazard as detection: 2.494
7) Average percentage of stops on hazards while driving: 11 %
Deviation values:
2) Standard deviation of first fixation duration: 1.083
3) Standard deviation of time of first fixation: 5.994
4) Standard deviation of fixation percentage during hazard: 21.998 %
5) Standard deviation for fixation number on hazard: 1.602
6) Standard deviation for fixation number on hazard as detection: 1.394
----------------------------------------
Participant 30 - 32 lines
Analysis made on 1992 lines
Number of hazards seen by the participants: 30
Mean values:
1) Accuracy: 93 %
2) Average first fixation duration: 0.981
3) Average time of first fixation before hazard: 6.22
4) Average fixation percentage during hazard: 47.998 %
5) Average fixation number on hazard: 3.233
6) Average fixation number on hazard as detection: 2.633
7) Average percentage of stops on hazards while driving: 23 %
Deviation values:
2) Standard deviation of first fixation duration: 1.021
3) Standard deviation of time of first fixation: 3.569
4) Standard deviation of fixation percentage during hazard: 21.004 %
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5) Standard deviation for fixation number on hazard: 2.14
6) Standard deviation for fixation number on hazard as detection: 1.683
----------------------------------------
```

Analysis made on 1992 lines Number of hazards seen by the participants: 1669 Mean values: 1) Accuracy: 85 2) Average first fixation duration: 1.187 3) Average time of first fixation before hazard: 5.264 4) Average fixation percentage during hazard: 53.92 5) Average fixation number on hazard: 2.747 6) Average fixation number on hazard as detection: 1.394 7) Average percentage of stops on hazards while driving: 11 Deviation values: 2) Standard deviation of first fixation duration: 1.083 3) Standard deviation of time of first fixation: 5.994 4) Standard deviation of fixation percentage during hazard: 21.998 5) Standard deviation for fixation number on hazard: 2.747 6) Standard deviation for fixation number on hazard as detection: 1.394

In [8]:
```
# To generate the corrected raw tables.
def generate_data_per_participant():
    for value in participant_values:
        a = [["Participant", "Record_Name", "Track", "Hazard_number", "Hazard_type", "Se
              "First fixation", "Second fixation", "Third fixation", "Fouth fixation", "
              "Sixth fixation", "Seventh fixation", "Cross event", "Detections", "Fixati
              "Detection laps", "Percentage of fixation during hazard"]]
        a.extend(per_participant(data, value))
        with open("participant_data_"+value+".csv", "wb") as f:
            writer = csv.writer(f, delimiter = ';')
            writer.writerows(a)

# generate_data_per_participant()
```

In [9]:
```
# To generate tables by hazard
def generate_data_per_hazard():
    for value in hazard_values:
        a = [["Participant", "Record_Name", "Track", "Hazard_number", "Hazard_type", "Se
              "First fixation", "Second fixation", "Third fixation", "Fouth fixation", "
              "Sixth fixation", "Seventh fixation", "Cross event", "Detections", "Fixati
              "Detection laps", "Percentage of fixation during hazard"]]
        a.extend(per_hazard(results, value))
        with open("hazard_"+value+".csv", "wb") as f:
            writer = csv.writer(f, delimiter = ';')
            writer.writerows(a)

# generate_data_per_hazard()
```

In [10]:
```
# To generate tables by hazard
def generate_results_participant():
    a = [["Participant", "Accuracy", "Average first fixation time", "Std first dixation
          "Average laps time between first fixation and hazard", "Std time between f
          "Percentage of fixation during hazard", "Std of fixation during hazard",
          "Average number of fixations", "Std of number of fixations",
          "Average number of detections", "Std of number of detections",
```

```
                    "Percentage of stops"]]

        # Adding the average results first
        new_line = ["0_Average"]
        new_line.extend(analyse(results))
        a.append(new_line)

        # Adding results participant per participant
        for value in participant_values:
            new_line = [value]
            new_line.extend(analyse(per_participant(results, value)))
            a.append(new_line)

        # Writting the results as CSV
        with open("all_participants_results.csv", "wb") as f:
            writer = csv.writer(f, delimiter = ';')
            writer.writerows(a)

    # generate_results_participant()
```

In [11]:
```
    # To generate tables by hazard
    def generate_results_hazard():
        a = [["Participant", "Accuracy", "Average first fixation time", "Std first dixation
                "Average laps time between first fixation and hazard", "Std time between f
                "Percentage of fixation during hazard", "Std of fixation during hazard",
                "Average number of fixations", "Std of number of fixations",
                "Average number of detections", "Std of number of detections",
                "Percentage of stops"]]

        # Adding the average results first
        new_line = ["0_Average"]
        new_line.extend(analyse(results))
        a.append(new_line)

        # Adding results participant per participant
        for value in hazard_values:
            new_line = [value]
            new_line.extend(analyse(per_hazard(results, value)))
            a.append(new_line)

        # Writting the results as CSV
        with open("all_hazards_results.csv", "wb") as f:
            writer = csv.writer(f, delimiter = ';')
            writer.writerows(a)

    # generate_results_hazard()
```

In [ ]: