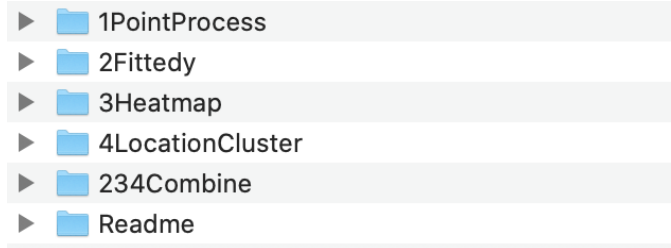


## 0 Introduction

- This file explains how all the plots in the file Code\_Plot can be created.
- There are 6 files in Code\_Plot, they are:



1. 1PointProcess
  2. 2Fittedy
  3. 3Heatmap
  4. 4LocationCluster
  5. 234Combine
  6. Readme
- The preceding 5 files: 1PointProcess, 2Fittedy, 3Heatmap, 4LocationCluster, 234Combine have the Matlab codes for creating the plots.
  - And the plot created are stored in the folder plot.
  - The Readme folder introduce the plotting process.

# 1 1PointProcess

- The file PointProcess.m is the code that plots the temporal point process diagram and the corresponding congestion intensity function.
- The input data is: 2015\_N1\_N\_2571.mat.
- There are 4 output plots– the temporal point process diagram for weekday, the temporal point process diagram for holiday, the intensity function for weekday, and the temporal point process diagram for holiday.

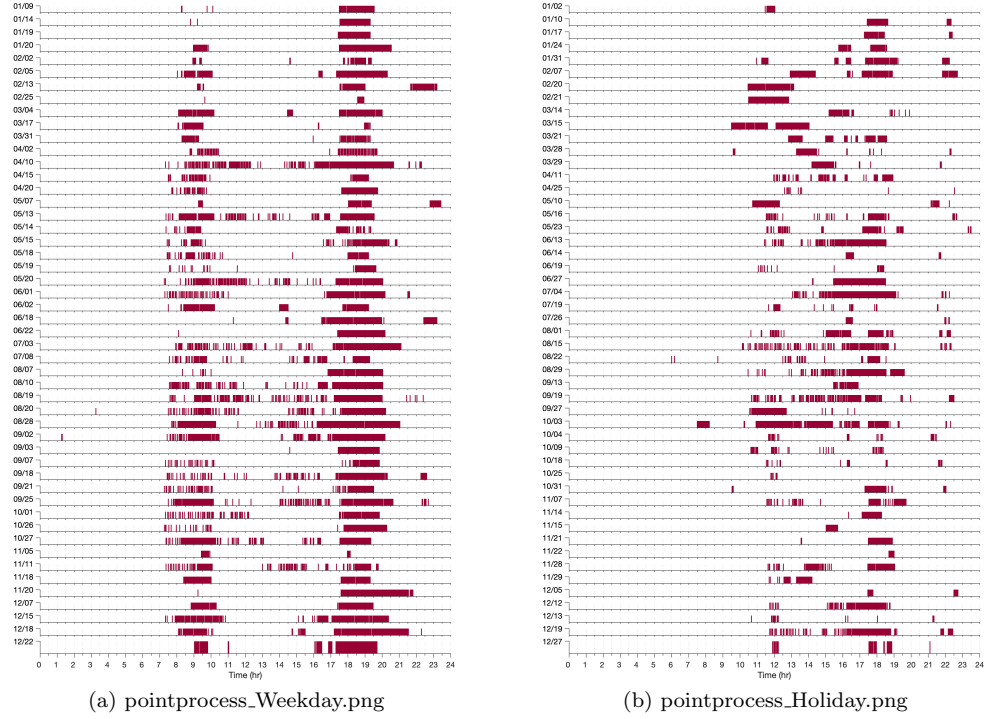


Figure 1: Point Process Diagram

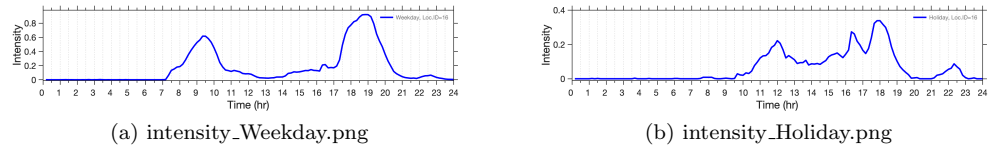


Figure 2: Intensity function

## 2 2Fittedy

- The file Fittedy.m this file is the code that plots the results from KCFC
- The KCFC results are stored in the file detail\_weekday\_7.mat (with number of clusters  $K_1 = 7$ ) and detail\_holiday\_5.mat (with number of clusters  $K_2 = 5$ ).

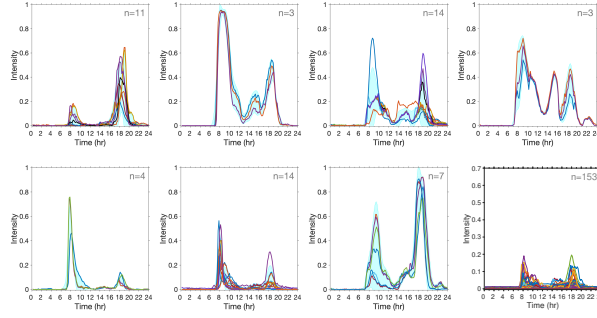


Figure 3: Weekdays ( $K_1 = 7$ )

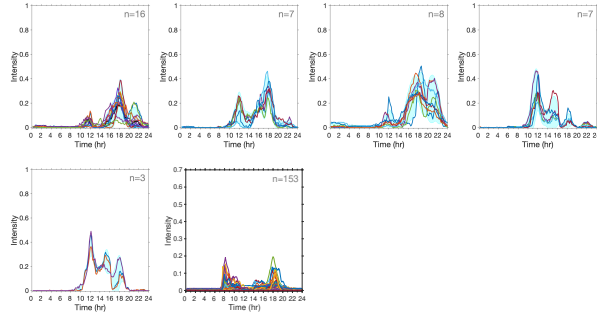


Figure 4: Holidays ( $K_2 = 5$ )

## 3 3Heatmap

- The file Heatmap.m in this file is the code that plots the heatmap.
- The input data are: detail\_weekday\_7.mat ( $K_1 = 7$ ) and detail\_holiday\_5.mat ( $K_2 = 5$ ).
- And there are 2 output plots: one for the weekday group and one for the holiday group.

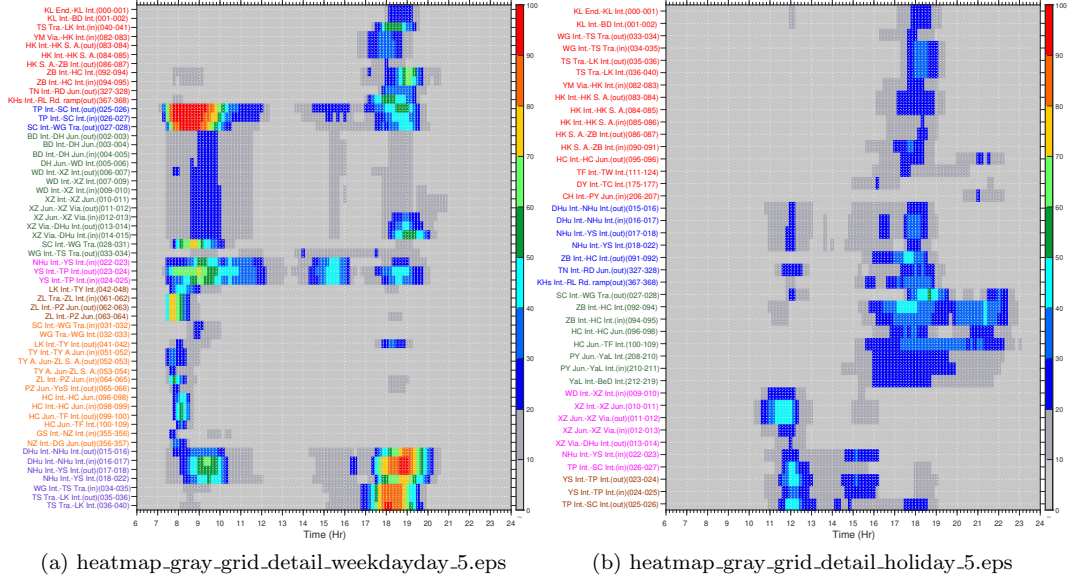


Figure 5: Hearmap

## 4 4LocationCluster

- The file LocationCluster.m in this file is the code that plots the Location-Cluster.
- The input data are: detail\_weekday\_7.mat ( $K_1 = 7$ ) and detail\_holiday\_5.mat ( $K_2 = 5$ ).
- And there are 2 output plots: one for the weekday group and one for the holiday group.

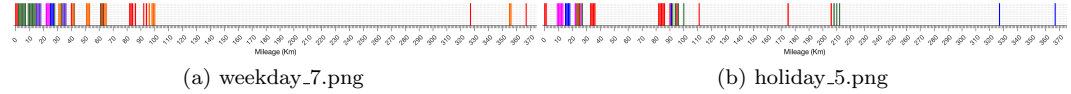


Figure 6: Point Process Diagram

## 5 234Combine

- Since Fittedy.m, heatmap.m, and LocationCluster.m actually use the same input data of detail\_weekday\_7.mat ( $K_1 = 7$ ) and detail\_holiday\_5.mat ( $K_2 = 5$ ).

- The file `Combine.m` can run them all together.
- I store the output in the folder `plot`.
- In the folder `plot`, there are two files: `weekday_7` and `holiday_5`.
- The folder `weekday_7` stores all the results of the weekday group.
- And the folder `holiday_5` stores all the results of the holiday group.