**Abstract**

This document consists of density estimation for different datasets using Non-parametric density estimation (Gaussian Kernel)

**Results**:

**Datasets**:

D1=(10,15,18,51,51,52,52,54,54,54,56,58,58,60,60,61,61,62,63,63,64,65,65,67,67,68,68,69,73,130)

D2=(35,74,75,76,76,76,85,87,87,88,88,92,95,96,97,100,105,106,107,108,109,110,111,111,115,115,116,116,175,180)

D3 = (20,36,38,39,40,41,42,44,48,51,52,54,55,56,58,63,65,66,67,68,69,73, 78,81,84,85,87,88,92, 105)

**Tool:**

**R Density Plot: [https://www.rdocumentation.org/packages/stats/versions/3.6.2/topics/density]**

|  |  |
| --- | --- |
| Datasets | With Outliers |
| D1 | C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D1_0.75.png |
| C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D1_1.5.png |
| C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D1_3.5.png |
| C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D1_6.5.png |
| C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D1_9.5.png |
| C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D1_12.5.png |
| C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D1_18.png |
| D2 | C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D2_0.75.png |
| C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D2_1.5.png |
| C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D2_3.png |
| C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D2_6.png |
|  C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D2_10.png |
| C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D2_16.png |
| C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D2_25.png |
| D3 | C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D3_0.75.png |
| C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D3_1.5.png |
| C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D3_3.png |
| C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D3_6.png |
| C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D3_10.png |
| C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D3_15.png |
| C:\Users\mdmah\PycharmProjects\ProfessorEick\DataMiningFall2022\Outputs\DensityPlots\D3_20.png |