**A picture containing sky, outdoor

Description automatically generated**

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| RoundSqr |
| **Adelphoi First Match Documentation-Backend** |

**A picture containing sky, outdoor

Description automatically generated**

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Adelphoi Documentation-Technical

Backend:

## 1. Data files:

Input data files: Total records merged and this is the final excel with 698 records.





This excel consists of files with Program completion POSITIVE and Remained out of care POSITIVE

## 2. Concatenation, Mean imputation, Data Preprocessing

Data was given in 3 sets, which we concatenated based on Program completion POSITIVE and Remained out of care POSITIVE and preprocessed date by imputing the mean values to the below fields based on Gender.

### 2.1 Imputation Values - Female

|  |  |
| --- | --- |
| Family support | 1 |
| Level of aggression | 2 |
| Fire setting | 0 |
| Client self-harm | 0 |
| Abuse, or neglect | 1 |
| CANS\_LifeFunctioning | 13 |
| CANS\_YouthStrengths | 14 |
| CANS\_CareGiverStrengths | 10 |
| CANS\_Culture | 0 |
| CANS\_YouthBehavior | 9 |
| CANS\_YouthRisk | 4 |
| CANS\_Trauma\_Exp | 5 |
| FAST\_FamilyTogetherScore | 8 |
| FAST\_CaregiverAdvocacyScore | 7 |
| YLS\_PriorCurrentOffenses\_Score | 1 |
| YLS\_FamCircumstances\_Score | 4 |
| YLS\_Edu\_Employ\_Score | 3 |
| YLS\_Peer\_Score | 3 |
| YLS\_Subab\_Score | 2 |
| YLS\_Leisure\_Score | 2 |
| YLS\_Personality\_Score | 4 |
| YLS\_Attitude\_Score | 10 |
| Screening tool for Trauma  --Total score | 15 |

### 2.2 Imputation Values - Male

|  |  |
| --- | --- |
| Family support | 1 |
| Level of aggression | 2 |
| Fire setting | 0 |
| Client self-harm | 0 |
| Abuse, or neglect | 1 |
| CANS\_LifeFunctioning | 11 |
| CANS\_YouthStrengths | 13 |
| CANS\_CareGiverStrengths | 7 |
| CANS\_Culture | 0 |
| CANS\_YouthBehavior | 8 |
| CANS\_YouthRisk | 4 |
| CANS\_Trauma\_Exp | 4 |
| FAST\_FamilyTogetherScore | 7 |
| FAST\_CaregiverAdvocacyScore | 6 |
| YLS\_PriorCurrentOffenses\_Score | 1 |
| YLS\_FamCircumstances\_Score | 3 |
| YLS\_Edu\_Employ\_Score | 2 |
| YLS\_Peer\_Score | 2 |
| YLS\_Subab\_Score | 1 |
| YLS\_Leisure\_Score | 2 |
| YLS\_Personality\_Score | 3 |
| YLS\_Attitude\_Score | 1 |
| Screening tool for Trauma--Total score | 15 |

### 2.3 Modeling-Different Models

#### 2.3.1 Features considered:

'EpisodeNumber',

'Number of foster care placements',

'AgeAtEpisodeStart',

'Number of prior placements \n(excluding shelter and detention)',

'Number of prior treatment terminations (excluding shelter or detention)',

'Length of time since living at home', 'Termination directly to AV',

'Death Caregiver','Borderline IQ (below 70)',

'Hist of prior program SAO',

' Death Silblings',

'Alcohol Use',

'Drug Use',

'Incarcerated caregivers',

'Incarcerated siblings',

'Number of prior AWOLS',

'Animal cruelty',

'Number of prior hospitalizations',

'Compliant with medication',

'Significant mental health symptoms',

'Severe mental health symptoms',

'Autism Diagnosis',

'Borderline Personality',

'Psychosis',

'Reactive Attachment Disorder',

'Schizophrenia',

'YLS\_PriorCurrentOffenses\_Score',

'YLS\_FamCircumstances\_Score',

'YLS\_Edu\_Employ\_Score',

'YLS\_Peer\_Score', 'YLS\_Subab\_Score',

'YLS\_Leisure\_Score',

'YLS\_Personality\_Score',

'YLS\_Attitude\_Score',

'Client self-harm',

'CANS\_LifeFunctioning',

'CANS\_YouthStrengths',

'CANS\_CareGiverStrengths',

'CANS\_Culture',

'CANS\_YouthBehavior',

'CANS\_YouthRisk',

'CANS\_Trauma\_Exp',

'Family support',

'Level of aggression',

'Fire setting',

'Abuse, or neglect',

'Screening tool for Trauma--Total score',

'Gender',

'LS\_Type',

'CYF\_code'

#### 2.3.2 Output features considered:

Program

Level of care

facility Type

Program completion

Return to care

Program for 1 &3---constraint

## 3. Models

### 3.1 Python files

**1. Program**



**2. Level of care**



**3. Facility type**



**4. Program for 1& 3**



**5. Program completion**



**6. Return to care**



### 3.2 Pickels

  

  

### 3.3 Testing Files for all the models-

  

  

### 3.4 Decision tree Visualization



### 3.5 Location mapping excel

