Irregular 3 Results

**PL\_model\_1\_Scattered\_iReg3**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Model | Sensors 04 | Sensors 08 | Sensors 16 | Sensors 24 | Sensors 32 | Sensors 40 | Sensors 48 |
| LinearRegression | 10.19199122 | 6.469743726 | 4.937245 | 4.072503 | 3.494212 | 3.185628 | 2.932108 |
| DecisionTreeRegressor | 14.16535698 | 10.20063384 | 9.757218 | 9.774277 | 9.681711 | 9.609679 | 9.771894 |
| RandomForestRegressor | 10.30674505 | 6.288726469 | 5.416186 | 4.91936 | 4.610873 | 4.453092 | 4.169439 |
| KNeighborsRegressor | 10.48538525 | 5.683585315 | 4.103306 | 3.18372 | 2.762769 | 2.484806 | 2.331185 |
| XGBRegressor | 10.86445906 | 6.611595042 | 5.57599 | 5.014993 | 4.640062 | 4.658574 | 4.403278 |

**PL\_model\_1\_smoothing1\_iReg3**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Model | Sensors 04 | Sensors 08 | Sensors 16 | Sensors 24 | Sensors 32 | Sensors 40 | Sensors 48 |
| LinearRegression | 8.205468608 | 1.731887784 | 1.227396 | 0.952547 | 0.805259 | 0.725629 | 0.671372 |
| DecisionTreeRegressor | 3.076821103 | 0.930231408 | 1.474761 | 1.329973 | 1.130181 | 1.177864 | 1.242897 |
| RandomForestRegressor | 2.295593998 | 0.551288468 | 0.65001 | 0.483073 | 0.416914 | 0.364066 | 0.366733 |
| KNeighborsRegressor | 1.483596208 | 0.347627864 | 0.275741 | 0.259259 | 0.245238 | 0.238361 | 0.23482 |
| XGBRegressor | 2.689702736 | 1.073797763 | 0.997766 | 1.054084 | 1.044555 | 0.907718 | 0.877118 |

**PL\_model\_1\_smoothing2\_iReg3**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Model | Sensors 04 | Sensors 08 | Sensors 16 | Sensors 24 | Sensors 32 | Sensors 40 | Sensors 48 |
| LinearRegression | 8.172819628 | 1.488613651 | 1.068362 | 0.807041 | 0.677517 | 0.580826 | 0.515037 |
| DecisionTreeRegressor | 2.498154914 | 0.867501933 | 0.96288 | 0.827516 | 0.550678 | 0.884528 | 0.715946 |
| RandomForestRegressor | 1.187431588 | 0.334348342 | 0.490694 | 0.376891 | 0.270949 | 0.265544 | 0.270863 |
| KNeighborsRegressor | 0.41152285 | 0.220102671 | 0.217309 | 0.219774 | 0.218757 | 0.218984 | 0.220677 |
| XGBRegressor | 1.717742184 | 0.83538515 | 0.788951 | 0.764654 | 0.751806 | 0.660267 | 0.579619 |

Irregular 3 Results

**PL\_model\_2\_Scattered\_iReg3**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Model | Sensors 04 | Sensors 08 | Sensors 16 | Sensors 24 | Sensors 32 | Sensors 40 | Sensors 48 |
| LinearRegression | 23.43225776 | 22.66078164 | 18.01288 | 15.76682 | 13.34251 | 12.29288 | 11.56864 |
| DecisionTreeRegressor | 32.99020518 | 32.62907709 | 27.99651 | 26.31728 | 23.294 | 22.52877 | 22.80757 |
| RandomForestRegressor | 24.31554529 | 23.07254875 | 18.96967 | 17.46911 | 14.91012 | 14.15511 | 13.95322 |
| KNeighborsRegressor | 25.17351603 | 24.52233668 | 19.47231 | 17.46726 | 14.40299 | 12.95318 | 12.40836 |
| XGBRegressor | 25.47038536 | 24.7340422 | 19.70167 | 17.69638 | 14.80024 | 13.72066 | 13.37341 |

**PL\_model\_2\_smoothing1\_iReg3**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Model | Sensors 04 | Sensors 08 | Sensors 16 | Sensors 24 | Sensors 32 | Sensors 40 | Sensors 48 |
| LinearRegression | 9.134841863 | 5.367098505 | 3.164268 | 2.296612 | 1.886033 | 1.357284 | 1.17167 |
| DecisionTreeRegressor | 3.238563236 | 2.616920134 | 2.35977 | 2.334041 | 1.719094 | 1.455397 | 1.887181 |
| RandomForestRegressor | 2.090589171 | 1.325855572 | 0.978176 | 0.850164 | 0.628177 | 0.586921 | 0.799864 |
| KNeighborsRegressor | 1.130382005 | 0.499717496 | 0.343686 | 0.311211 | 0.271909 | 0.259191 | 0.25329 |
| XGBRegressor | 2.605026286 | 1.895339902 | 1.53894 | 1.386587 | 1.182356 | 1.103519 | 1.319154 |

**PL\_model\_2\_smoothing2\_iReg3**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Model | Sensors 04 | Sensors 08 | Sensors 16 | Sensors 24 | Sensors 32 | Sensors 40 | Sensors 48 |
| LinearRegression | 9.883780162 | 6.968346168 | 4.59278 | 3.515438 | 2.934547 | 2.284288 | 1.990171 |
| DecisionTreeRegressor | 3.051131025 | 1.823886956 | 2.169751 | 1.458851 | 1.210415 | 1.492493 | 1.486941 |
| RandomForestRegressor | 1.982131524 | 0.933448221 | 0.746768 | 0.573121 | 0.493166 | 0.415444 | 0.433522 |
| KNeighborsRegressor | 1.333364045 | 0.276515715 | 0.228322 | 0.229009 | 0.225874 | 0.222098 | 0.224305 |
| XGBRegressor | 2.514715671 | 1.499138282 | 1.16444 | 1.159172 | 0.924839 | 0.970148 | 1.039225 |

regular 1 Results

**PL\_model\_1\_Scattered\_Reg1**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Model | Sensors 04 | Sensors 08 | Sensors 16 | Sensors 24 | Sensors 32 | Sensors 40 | Sensors 48 |
| LinearRegression | 9.133444 | 6.349729 | 4.720811 | 3.874629 | 3.473282 | 3.277387 | 3.004183 |
| DecisionTreeRegressor | 12.03647 | 10.21979 | 10.03503 | 9.891802 | 9.669675 | 10.0062 | 9.780984 |
| RandomForestRegressor | 8.561793 | 6.302762 | 5.440445 | 4.861622 | 4.625432 | 4.511431 | 4.284668 |
| KNeighborsRegressor | 8.779245 | 5.710417 | 4.178571 | 3.200542 | 2.85339 | 2.596213 | 2.386164 |
| XGBRegressor | 9.21074 | 6.883853 | 5.672769 | 5.048862 | 4.838814 | 4.839572 | 4.567671 |

**PL\_model\_1\_smoothing1\_iReg1**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Model | Sensors 04 | Sensors 08 | Sensors 16 | Sensors 24 | Sensors 32 | Sensors 40 | Sensors 48 |
| LinearRegression | 4.358074 | 1.386951 | 1.044354 | 0.802271 | 0.74142 | 0.712741 | 0.65655 |
| DecisionTreeRegressor | 1.557298 | 1.303072 | 1.101237 | 1.09205 | 1.136427 | 1.264412 | 1.42433 |
| RandomForestRegressor | 0.78734 | 0.481115 | 0.504509 | 0.438841 | 0.418289 | 0.392437 | 0.501631 |
| KNeighborsRegressor | 0.571079 | 0.355171 | 0.277317 | 0.258325 | 0.241057 | 0.240331 | 0.233462 |
| XGBRegressor | 1.340635 | 1.087169 | 0.981881 | 0.993284 | 0.971509 | 1.204051 | 0.903004 |

**PL\_model\_1\_smoothing2\_Reg1**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Model | Sensors 04 | Sensors 08 | Sensors 16 | Sensors 24 | Sensors 32 | Sensors 40 | Sensors 48 |
| LinearRegression | 4.283357 | 1.209586 | 0.864362 | 0.654784 | 0.588235 | 0.539324 | 0.483823 |
| DecisionTreeRegressor | 1.257447 | 1.081026 | 0.975803 | 1.201447 | 0.747915 | 0.860435 | 0.898032 |
| RandomForestRegressor | 0.559701 | 0.311426 | 0.37881 | 0.279117 | 0.239443 | 0.249015 | 0.229895 |
| KNeighborsRegressor | 0.227204 | 0.219506 | 0.219381 | 0.218807 | 0.218209 | 0.217426 | 0.216935 |
| XGBRegressor | 1.115441 | 0.844282 | 0.665156 | 0.642934 | 0.630626 | 0.661312 | 0.632361 |

regular 1 Results

**PL\_model\_2\_Scattered\_Reg1**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Model | Sensors 04 | Sensors 08 | Sensors 16 | Sensors 24 | Sensors 32 | Sensors 40 | Sensors 48 |
| LinearRegression | 24.44419 | 23.41273 | 19.13293 | 17.1968 | 15.28139 | 14.35506 | 13.42745 |
| DecisionTreeRegressor | 34.66848 | 33.93477 | 30.16434 | 29.39296 | 27.62953 | 27.05281 | 27.11374 |
| RandomForestRegressor | 25.48976 | 24.20544 | 20.17835 | 19.13775 | 17.70399 | 17.15066 | 16.82447 |
| KNeighborsRegressor | 26.57298 | 25.63264 | 21.34354 | 19.41767 | 17.3804 | 16.2817 | 15.25159 |
| XGBRegressor | 27.11333 | 25.58743 | 21.17784 | 19.30959 | 17.50065 | 16.65002 | 16.07861 |

**PL\_model\_2\_smoothing1\_Reg1**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Model | Sensors 04 | Sensors 08 | Sensors 16 | Sensors 24 | Sensors 32 | Sensors 40 | Sensors 48 |
| LinearRegression | 6.91899 | 5.557802 | 3.823897 | 2.607455 | 2.262422 | 2.06024 | 1.726316 |
| DecisionTreeRegressor | 3.195363 | 2.487108 | 1.953556 | 1.822416 | 1.460711 | 1.684256 | 1.899569 |
| RandomForestRegressor | 2.122033 | 1.358161 | 0.817922 | 0.634221 | 0.592125 | 0.56488 | 0.666172 |
| KNeighborsRegressor | 1.477038 | 0.523933 | 0.338021 | 0.303724 | 0.27876 | 0.258997 | 0.253214 |
| XGBRegressor | 2.747767 | 2.028103 | 1.558624 | 1.343306 | 1.331726 | 1.252097 | 1.204674 |

**PL\_model\_2\_smoothing2\_Reg1**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Model | Sensors 04 | Sensors 08 | Sensors 16 | Sensors 24 | Sensors 32 | Sensors 40 | Sensors 48 |
| LinearRegression | 9.477106 | 7.854365 | 5.351866 | 4.097381 | 3.54501 | 3.328563 | 2.751891 |
| DecisionTreeRegressor | 2.88375 | 2.271149 | 1.87995 | 1.767916 | 1.203873 | 1.323662 | 1.608341 |
| RandomForestRegressor | 1.746664 | 0.915267 | 0.820032 | 0.659661 | 0.572599 | 0.566233 | 0.668816 |
| KNeighborsRegressor | 1.324122 | 0.244505 | 0.222373 | 0.223166 | 0.21894 | 0.221861 | 0.221178 |
| XGBRegressor | 2.50994 | 1.660625 | 1.353992 | 1.13493 | 1.047269 | 1.044872 | 1.080011 |