|  |  |  |  |
| --- | --- | --- | --- |
| **Multiple Regression** | Score Value | MSE | Alpha |
| LUAD | 0.8637598777456076  0.8136355375666193 | 142.93141268181432 | NA |
| LUSC | 0.5108911485304839  0.736665821075291 | 228.2038944875624 | NA |
|  |  |  |  |
| **Lasso Regression** |  |  |  |
| LUSC | 0.47803968619822107  0.543354518402533 | 455.88818574978563 | 0.5 |
|  | 0.5608122944428228  0.6711974771032776 | 328.25724040662567 | 0.1 |
|  | 0.5620097814210844  0.6934821469840837 | 306.00952717741865 | 0.05 |
|  | 0.5349774388408246  0.7038813414826682 | 295.62757858869287 | 0.01 |
|  | 0.5280281785470823  0.7045007408413457 | 295.00920643510403 | 0.005 |
|  | 0.521528690247802  0.7047290685992744 | 294.7812573334195 | 0.001 |
| LUAD | **0.6245269134620544**  0.7171010192891122 | 272.3942225472377 | 0.5 |
|  | **0.7467706983919331**  0.8258395334694598 | 167.69344576583305 | 0.1 |
|  | **0.7696185005567564**  0.841248191903781 | 152.85694998148705 | 0.05 |
|  | **0.7758639788609026**  0.8499241106398413 | 144.50319015862178 | 0.01 |
|  | **0.7738642149546658**  0.8504227533310893 | 144.02306333783903 | 0.005 |
|  | **0.7715637204792901**  0.8506050347892483 | 143.84755045350425 | 0.001 |
| **Ridge Regression** |  |  |  |
| LUSC | 0.4916040487043962  0.6195246169722692 | 379.8444068343303 | 0.5 |
|  | 0.5295476246282983  0.6979006923820446 | 301.5983094465816 | 0.1 |
|  | 0.5267888630596733  0.7028270262431866 | 296.6801453633694 | 0.05 |
|  | 0.5216371431683349  0.7046545736669334 | 294.85562872418353 | 0.01 |

|  |  |  |  |
| --- | --- | --- | --- |
|  | 0.520764054656805  0.7047174315186615 | 294.7928751152258 | 0.005 |
|  | 0.5200243522698644  0.7047378746254243 | 294.77246591108667 | 0.001 |
| LUAD | 0.6633514959258126  0.7490956299117217 | 241.58765313384734 | 0.5 |
|  | 0.7614228816531778  0.8423780392176876 | 151.76905676994093 | 0.1 |
|  | 0.7682463874605739  0.8482857550187083 | 146.08070947153345 | 0.05 |
|  | 0.7708775645948716  0.8504962441455038 | 143.9523014241464 | 0.01 |
|  | 0.7709260512607257  0.8505799803757282 | 143.8716745329724 | 0.005 |
|  | 0.7708437814926079  0.850613337824754 | 143.83955573080962 | 0.001 |

Testing

Training

Test\_size=0.3