# PCA (Without Clustering)

Using the dimensionality reduction of 64 to 3 dimensions for each case:

|  |  |  |  |
| --- | --- | --- | --- |
| Number of Gaussians | Error | Noise Variance | Variance Captured |
| 1 | 0.00066513554136017996 | 1.65894647233e-10 | 0.99999978798 |
| 2 | 0.00096991523540582896 | 1.82914186449e-09 | 0.99999905943 |
| 3 | 0.0009252080002267475 | 5.6475469575e-09 | 0.99999802 |
| 4 | 0.08316355832803371 | 5.30820992061e-05 | 0.98835382 |
| 5 | 0.13168450605652543 | 0.000140702579692 | 0.97219383 |

# Auto encoder

Using the dimensionality reduction of 64 to 3 dimensions for each case:

|  |  |
| --- | --- |
| Number of Gaussians | Error |
| 1 | 6.3598897369441365e-05 |
| 2 | 8.9377731807799819e-05 |
| 3 | 0.0006791434714976789 |
| 4 | 0.012172835066059536 |
| 5 | 0.023599231729196816 |

# CSDAS

|  |  |
| --- | --- |
| Number of Gaussians | Error |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |