

Answer:

Our unmixing matrix W obtained through gradient descent is shown below, where its rows w_j follow $s_j = w_j^T x$

$$\begin{pmatrix} 52.833 & 16.795 & 19.941 & -10.198 & -20.897 \\ -9.933 & -0.979 & -4.680 & 8.044 & 1.790 \\ 8.311 & -7.477 & 19.315 & 15.174 & -14.326 \\ -14.667 & -26.645 & 2.441 & 21.382 & -8.421 \\ -0.269 & 18.374 & 9.312 & 9.103 & 30.594 \end{pmatrix}$$