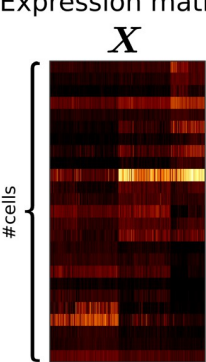


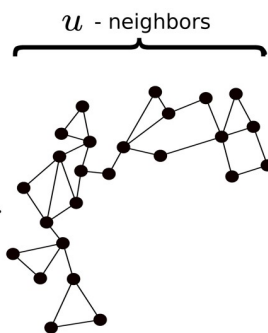
Expression matrix



PCA



k-Nearest Neighbor Graph



Normalize kNN distances



Create independent invariant mapping

$$s(M) = L^{-1} \left(M - V \right)$$

Diagram illustrating the creation of an independent invariant mapping, showing the relationship between $s(M)$, L^{-1} , M , and V .

Evaluate objective function

Denoised expression

Minimize with d, u

$$\left\| s(M) \times X - X \right\| \rightarrow \tilde{X}$$

Diagram showing the minimization of the objective function, resulting in the denoised expression \tilde{X} .

Search parameters until optima are found