# DBSCAN: Definitions and Algorithm Outline

- $\epsilon$-neighbourhood of $\mathbf{x}$ = set of points $\mathbf{x}_i$ such that $d(\mathbf{x}, \mathbf{x}_i) \leq \epsilon$
- $\mathbf{x}$ = core point if its $\epsilon$-neighbourhood contains at least $n_{min} \neq$ points
- $\mathbf{x}_i$ in the $\epsilon$-neighbourhood of core point $\mathbf{x}$ is directly reachable from $\mathbf{x}$
- $\mathbf{x}_n$ is reachable from $\mathbf{x}_1$ if there is a path $\mathbf{x}_1 \rightarrow \mathbf{x}_2 \rightarrow \cdots \rightarrow \mathbf{x}_n$ where $\mathbf{x}_{i+1}$ is directly reachable from $\mathbf{x}_i \Rightarrow$ non-reachable points are outliers