Trajectory Analysis

Pseudotime Inference
Order cells along developmental paths

Branching Processes
Identify cell fate decisions

Monocle Algorithm
Reverse graph embedding

Slingshot Method
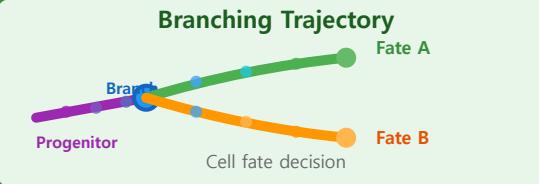Cluster-based trajectory inference

Validation Approaches
Known genes, time-series data

💡 Assumes continuous progression - verify biological relevance

Linear Trajectory
Early Intermediate Late
Single differentiation path

Branching Trajectory
Branch
Progenitor
Fate A
Fate B
Cell fate decision

Complex Trajectory
Type 1
Type 2a
Type 2b
Type 3
Multiple cell fates