a) Method

Inferrable trajectory types

	Priors required	Wrapper type	Platform	Topology inference	Cycle	Linear	Bifurcation	Multifurcation	Tree	Connected	Disconnected
Graph methods											
PAGA	×	Traj	Python	Free							
RaceID / StemID		Proj	R	Free							
SLICER	×	Cell	R	Free							
Tree methods											
Slingshot		Traj	R	Free							
PAGA Tree	×	Traj	Python	Free							
MST		Proj	R	Free							
pCreode		Proj	Python	Free							
SCUBA		Cluster	Python	Free							
Monocle DDRTree		Cell	R	Free							
Monocle ICA	×	Cell	R	Param							
cellTree maptpx		Cell	R	Free							
SLICE		Traj	R	Free							
cellTree VEM		Cell	R	Free							
ElPiGraph		Traj	R	Free							
Sincell		Cell	R	Free							
URD	×	Traj	R	Free							
CellTrails		Cell	R	Free							
Mpath	✖	Cluster	R	Free							
CellRouter	×	Cell	R	Free							
Multifurcation methods											
STEMNET	✖	Prob	R	Param							
FateID	✖	Prob	R	Param							
MFA	×	Prob	R	Param							
GPfates	×	Prob	Python	Param							
Bifurcation methods											
DPT		Traj	R	Fixed							
Wishbone	×	Traj	Python	Param							
Linear methods											
SCORPIUS		Linear	R	Fixed							
Component 1		Linear	R	Fixed							
Embeddr		Linear	R	Fixed							
MATCHER		Linear	Python	Fixed							
TSCAN		Linear	R	Fixed							
Wanderlust	×	Linear	Python	Fixed							
PhenoPath		Linear	R	Fixed							
topslam	×	Linear	Python	Fixed							
Waterfall		Linear	R	Fixed							
ElPiGraph linear		Traj	R	Fixed							
ouijaflow		Linear	Python	Fixed							
FORKS		Linear	Python	Fixed							
Cyclic methods											
Angle		Cycle	R	Fixed							
ElPiGraph cycle		Traj	R	Fixed							
reCAT		Cycle	R	Fixed							

b) Summary

Aggregated scores per experiment

Overall · Accuracy · Scalability · Stability · Usability

Prior information required

None

× Weak: Start or end cells

✖ Strong: Cell grouping or time course

Not shown, insufficient data points

CALISTA	ouija
cellTree Gibbs	pseudogp
GrandPrix	SCIMITAR
MERLoT	SCOUP