

529 **A Appendix**

530 **A.1 Code availability**

531 The code for the illustrative use cases are available on GitHub  
 532 <https://github.com/vanderschaarlab/synthcity-benchmarking>. The synthcity library is avail-  
 533 able on pip and GitHub. The tutorials folder contains additional illustrative examples.

534 **A.2 Supported algorithms and metrics**

Aspect	Evaluation Metric \ Software	Synthcity	YData	Gretel	SDV	DataSynthesizer	SmartNoise	nbsynthetic
Fidelity	Jensen-Shannon distance	✓						
	Wasserstein distance	✓						
	Total variation distance				✓			
	KL divergence	✓						
	Skewness				✓			
	Max-mean discrepancy	✓						✓
	KS test	✓			✓			✓
	PRDC	✓						
	Alpha-precision	✓						
	Survival Kaplan-Meier dist.	✓						
	Detection: linear	✓			✓			
	Detection: NN	✓						
	Detection: XGB	✓						
Detection: Linear					✓			
Utility	Linear model	✓			✓			
	MLP	✓			✓			
	XGBoost	✓			✓			
	Static survival	✓						
	Time-series	✓						
	Survival time-series	✓						
Privacy	Correct attribution prob.	✓			✓			
	K-anonymity	✓						
	K-map	✓						
	Delta-presence	✓						
	L-diversity	✓						
	DOMIAS	✓						
Identifiability score	✓							

Table 6: The evaluation metrics supported by synthcity and other open source synthetic data libraries. Comparisons are based on the software versions available at the time of writing.

Static	Censored	Time Series
Fully connected	Weibull AFT	LSTM
Residual network	Cox PH	GRU
TabNet	Random Survival Forest	RNN
	Survival Xgboost	Transformer
	Deephit	MLSTM_FCN
	Tenn	TCN
	Date	InceptionTime
		InceptionTimePlus
		XceptionTime
		ResCNN
		OmniScaleCNN
		XCM

Table 7: Available network architectures and survival models in synthcity for different data modalities. These components are compatible with multiple algorithms.

Algorithm \ Software	Synthcity	YData	Gretel	SDV	DataSynthesizer	SmartNoise	nbsynthetic
TabDDPM	✓						
ARF	✓						
GOGGLE	✓						
CTGAN	✓	✓		✓			✓
ACTGAN			✓				
TVAE	✓			✓			
Bayesian Network	✓						
Normalizing Flows	✓						
Survial GAN	✓						
Survival VAE	✓						
DoppelGANger			✓				
TimeGAN	✓	✓					
FourierFlows	✓						
Probabilistic AR	✓			✓			
DECAF	✓						
RadialGAN	✓						
ADSGAN	✓						
DPGAN	✓		✓			✓	
PATEGAN	✓					✓	
PrivBayes	✓				✓		

Table 8: The data generating algorithms supported by synthcity and other open source synthetic data libraries. Comparisons are based on the software versions available at the time of writing.