

# Flexibility

to select variables  
at inference

Different species  
and applications  
require different  
predictors



Describing the potential  
niche of species A



Mapping the current geographic  
distribution of species B

# MaskSDM

handles any subset of  
input variables

# Robustness

to missing variables  
during training and  
inference



Predictor  
availability varies  
across both  
location and time

# Explainability

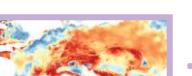
to interpret model predictions  
and performance

Predictions and  
performance with any  
subset of variables

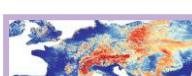
Suitability prediction



AUC: 86.7

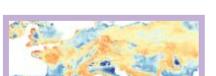


AUC: 87.0



AUC: 89.9

Shapley value



Shapley: 7.97

More accurate Shapley  
value estimates

Local and global contribution



Shapley: 6.00



Shapley: 4.10