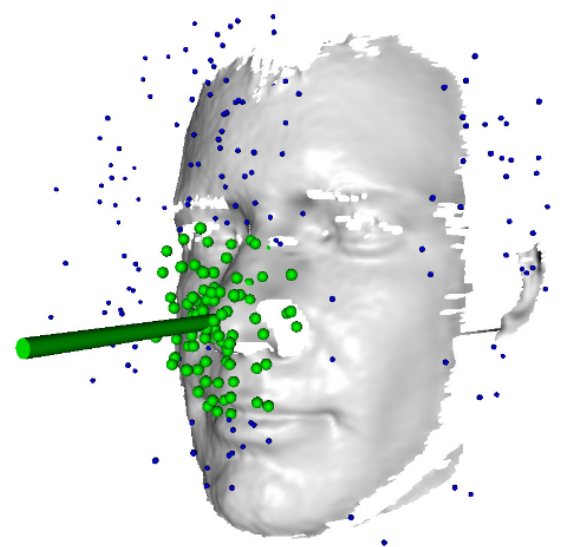


Random forests

a workhorse for many computer vision tasks

Head pose estimation



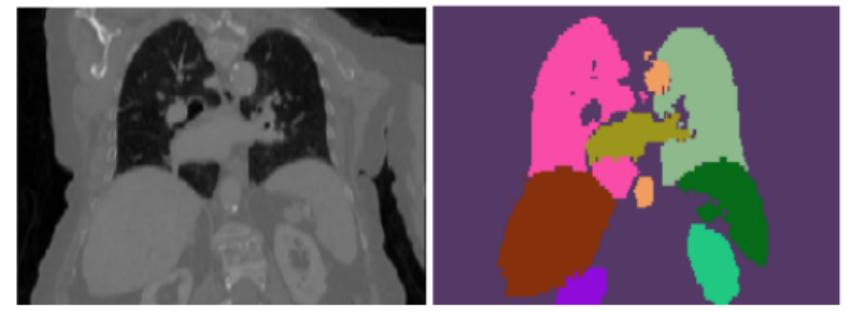
Human Pose Recognition



Object detection



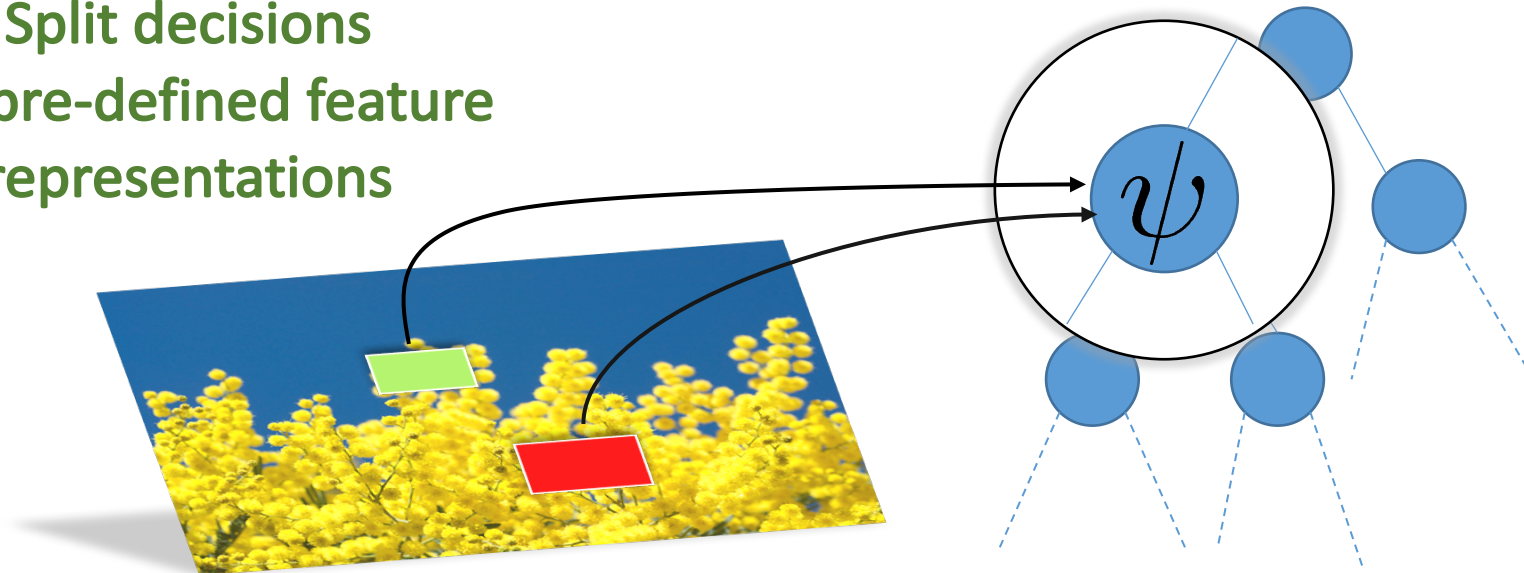
Semantic labelling



... but

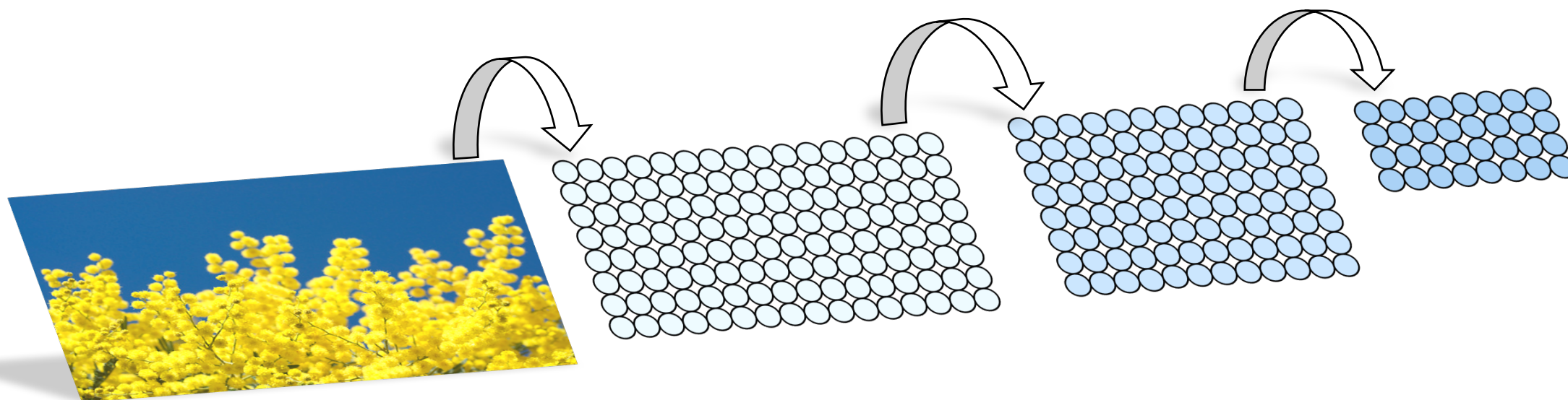
they lack a
representation learning
mechanism

Split decisions
use pre-defined feature
representations

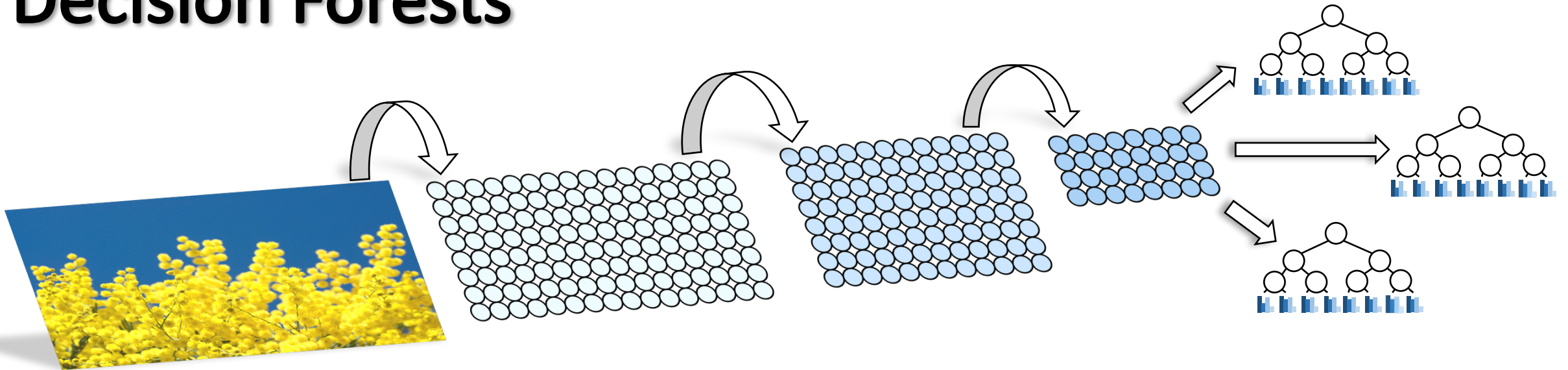


Deep networks

provide a natural mechanism
to develop new feature
representations

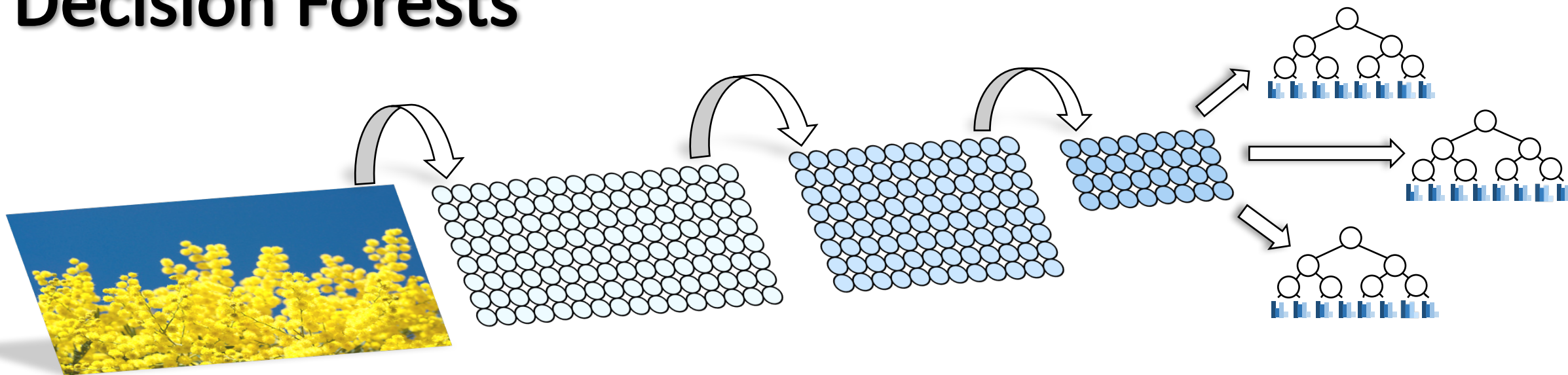


Deep Neural Decision Forests



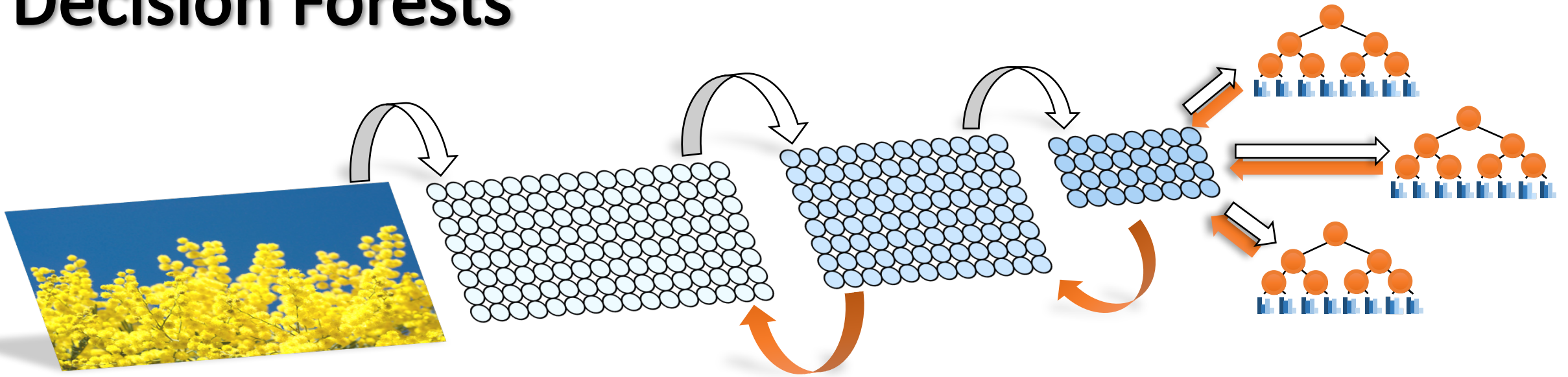
Decision forest with split
functions governed by a deep
neural network

Deep Neural Decision Forests



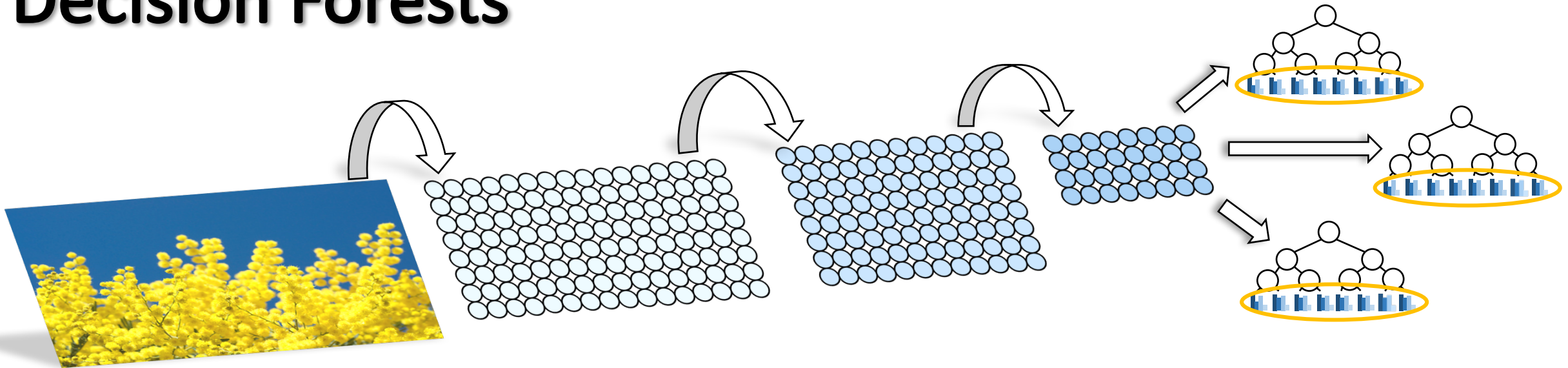
End-to-end trainable

Deep Neural Decision Forests



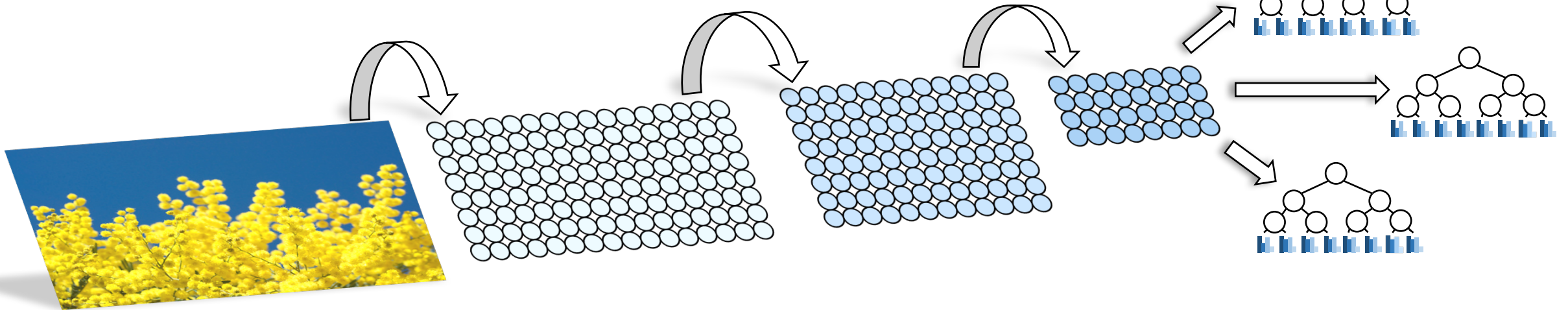
Split functions learnt by back-propagation through trees and deep network

Deep Neural Decision Forests



Learning of leaf predictions
by convex optimization

Deep Neural Decision Forests



For more details please
attend our talk and
visit our poster