

# Autonomous Learning Machine On Online Big Data Analytics

The Autonomous Learning Machine comprises of DEV DAN and Apache Spark, to learn from Big Data in appropriate timeline. DEV DAN is an evolving algorithm, which deals with data stream. Apache Spark create parallelism threads to parallelise DEV DAN, to reduce time complexity, with little to no deficiency in performance.

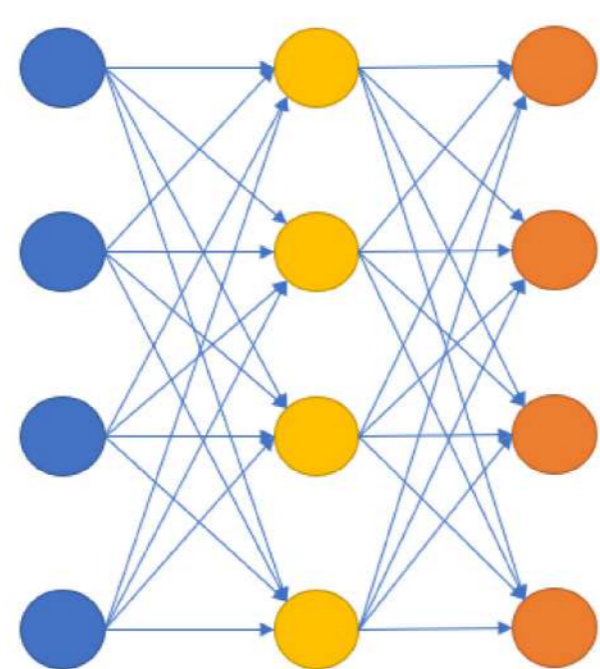
## DEV DAN

### Generative

### Discriminative

consist of:

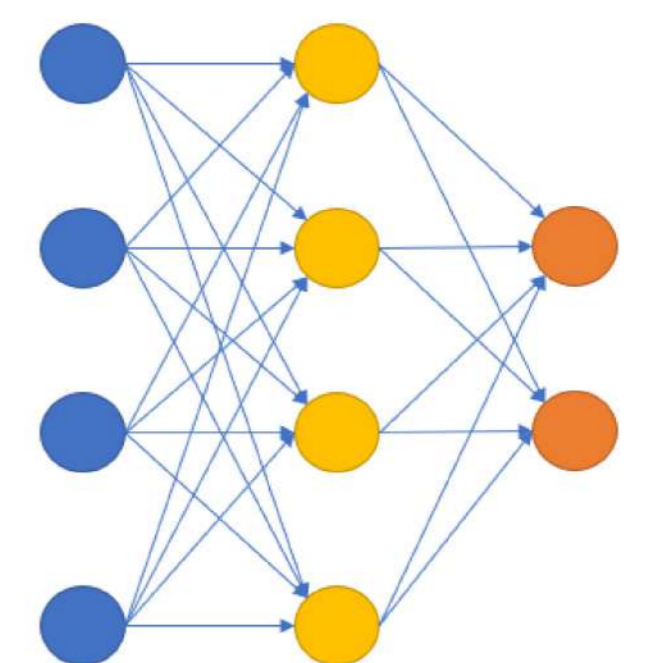
Input Layer Hidden Layer Output Layer



To Generate the estimate weights for its successor

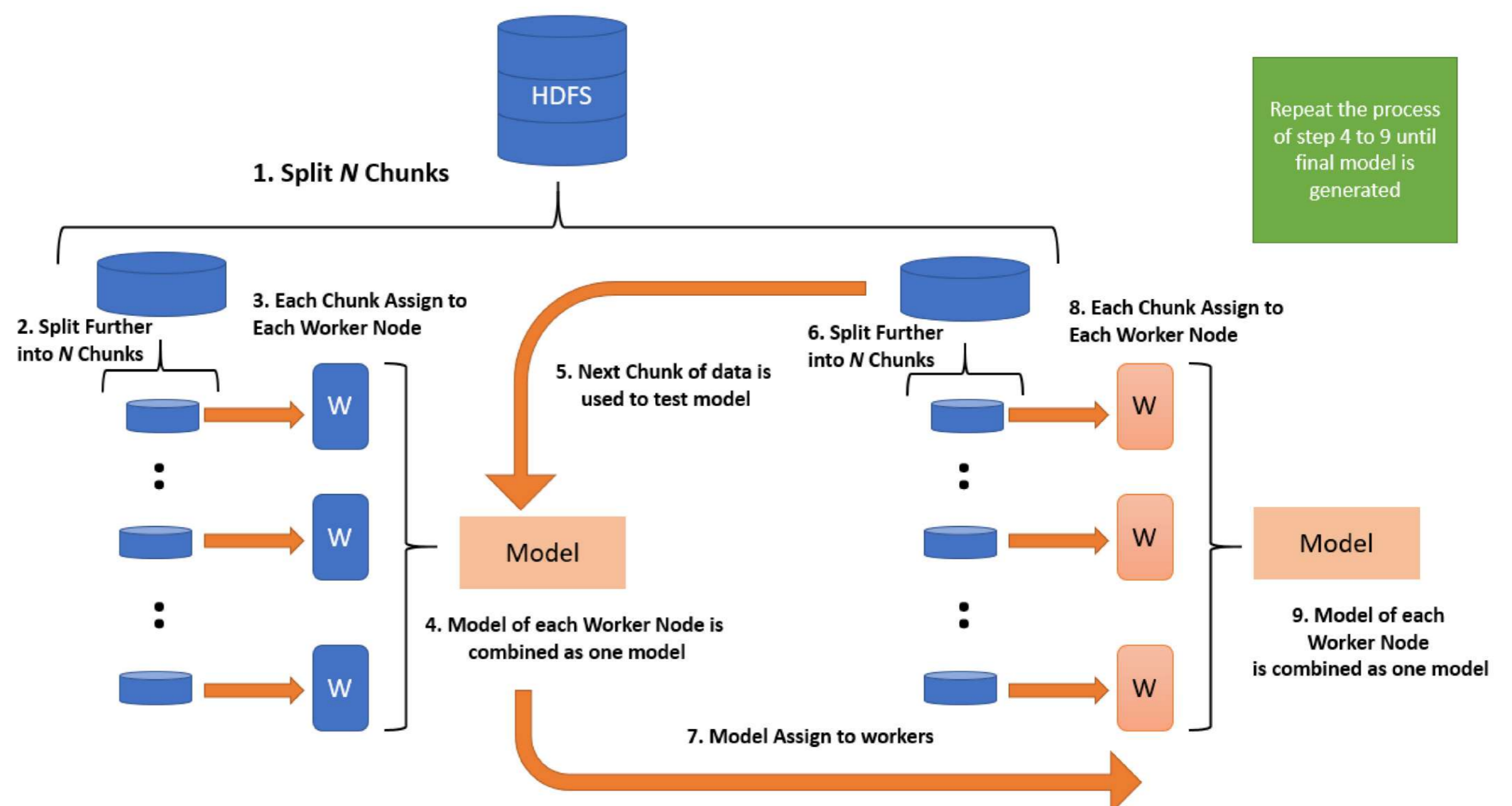


Input Layer Hidden Layer Output Layer



## Scalar DEV DAN

With the use of Apache Spark to create parallelism thread to parallelise DEV DAN:



This reduce time complexity yet maintain performance:

Dataset		Time Taken (s)		Accuracy (%)	
Name	Number of data:	Serial DEV DAN	Scalar DEV DAN	Serial DEV DAN	SCALAR DEV DAN
PokerHand	1 Million	11 182.9	4 102	51.5	51.5
SUSY	5 Million	221 478.3	14 441.37	76.3	73.8