

## Theano LEVEL 8

1. Conditions
2. IfElse vs Switch
3. Loop
4. Scan
5. Scan Example: Computing the sequence  $x(t) = \tanh(x(t-1).dot(W) + y(t).dot(U) + p(T-t).dot(V))$
6. Scan Example: Computing norms of lines of X
7. Scan Example: Computing norms of columns of X
8. Scan Example: Computing trace of X
9. Scan Example: Computing the sequence  $x(t) = x(t-2).dot(U) + x(t-1).dot(V) + \tanh(x(t-1).dot(W) + b)$
10. Scan Example: Computing the Jacobian of  $y = \tanh(v.dot(A))$  wrt x
11. Scan Example: Accumulate number of loop during a scan
12. Scan Example: Computing  $\tanh(v.dot(W) + b) * d$  where d is binomial
13. Scan Example: Computing  $\text{pow}(A, k)$