One Hot Encoding

Module 18 :)

12/4/2023

0.0.1 Sequential Design So Far

Designing circuits sof ar has been achieved through Binary Encoding

- Each state is a given binar number
- Use state table and k-maps to get simplified logic circuits for next states and output

This is limited by the number of total states and inputs → K-map becomes too large to handle by hand.

1 One Hot Encoding

Instead of assigning each state a binary number, each state is represented as a single binary value.

- Number of bits in the value is the number of states
- only one bit can be 1 for each value
- 1 flip flop for each state
- One hot encoding sues more flip flops than binary Encoding
- No state table necessary

*For 3 states, the encoding is State 0 ->001, State 1 -> 010, State 2 ->100