

Polar Code Example with Binary Tree Structure ($n = 2$)

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In [7]: # Function for Polar Encoding
function polar_encode(info_bits::Vector{Int}, frozen_bits::Vector{Bool})
    n = length(frozen_bits)
    u = zeros{Int}(n) # Initialize all bits to 0
    info_index = 1 # Pointer for information bits

    # Assign information bits to non-frozen positions
    for i in 1:n
        if !frozen_bits[i]
            u[i] = info_bits[info_index]
            info_index += 1
        end
    end

    # Recursive encoding using  $F^{\otimes n}$ 
```