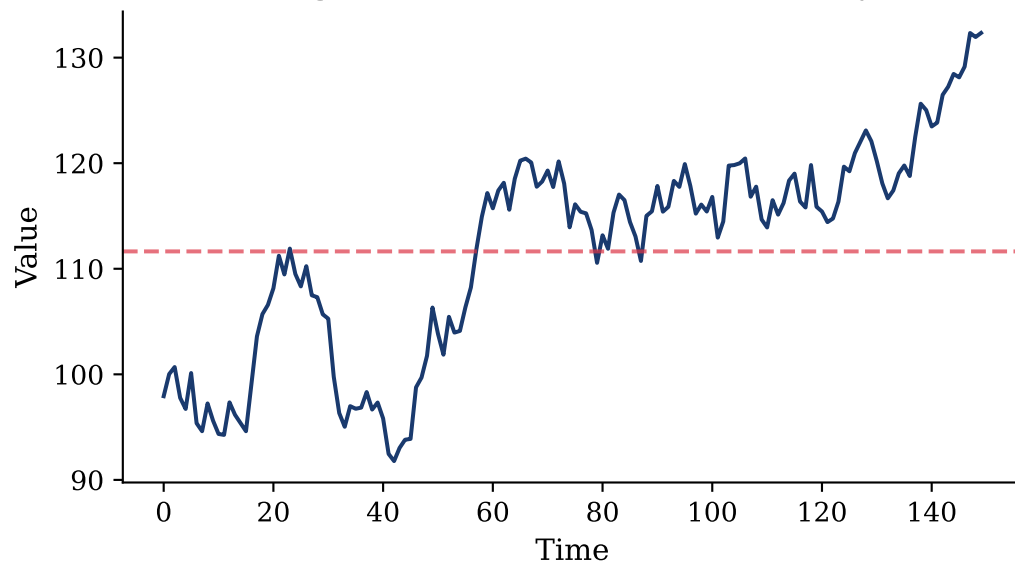
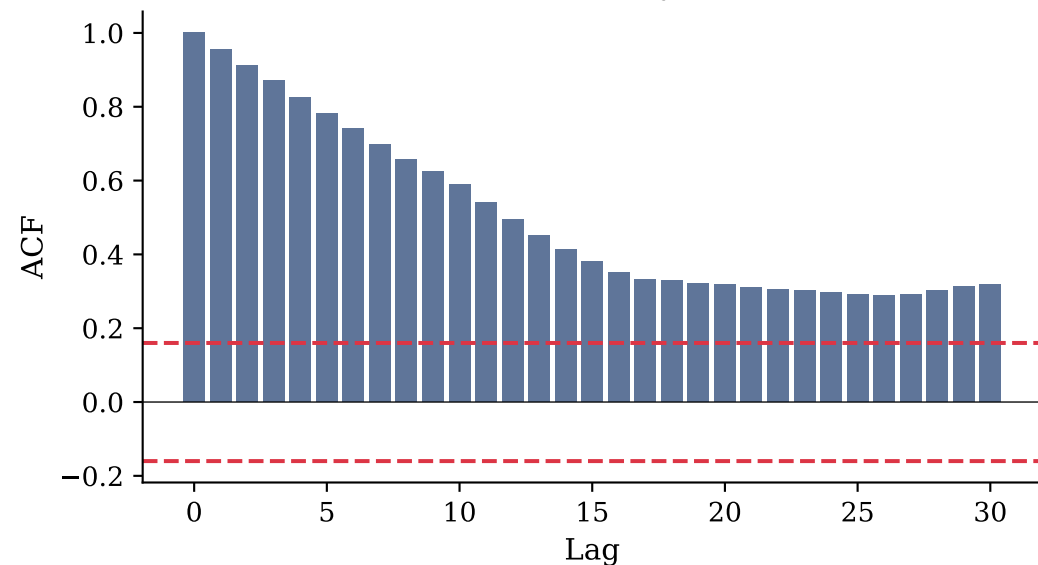


# The Magic of Differencing: Converting Non-Stationary to Stationary

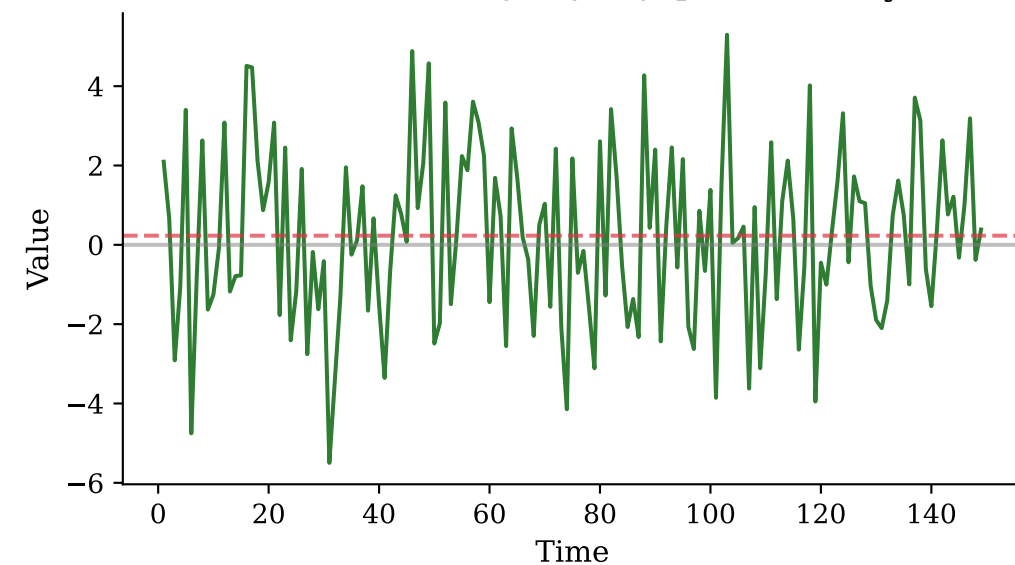
## Original Series: $Y_t$ (Non-Stationary)



## ACF of $Y_t$ : Slow Decay (Unit Root)



## Differenced: $\Delta Y_t = Y_t - Y_{t-1}$ (Stationary)



## ACF of $\Delta Y_t$ : Quick Decay (Stationary)

