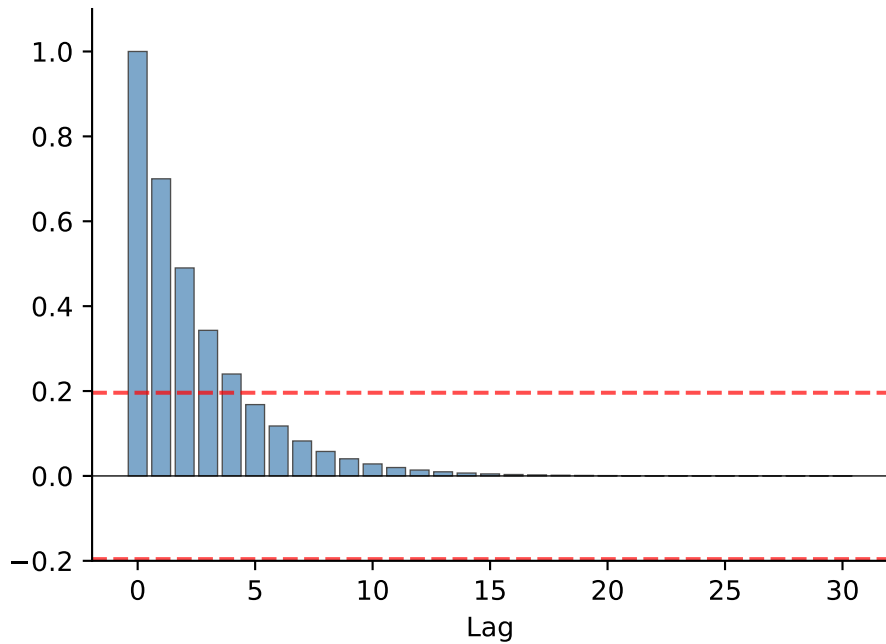Short Memory (AR(1))
Exponential Decay: $\rho_k = \phi^k$

Long Memory (ARFIMA, d=0.35)
Hyperbolic Decay: $\rho_k \sim k^{2d-1}$