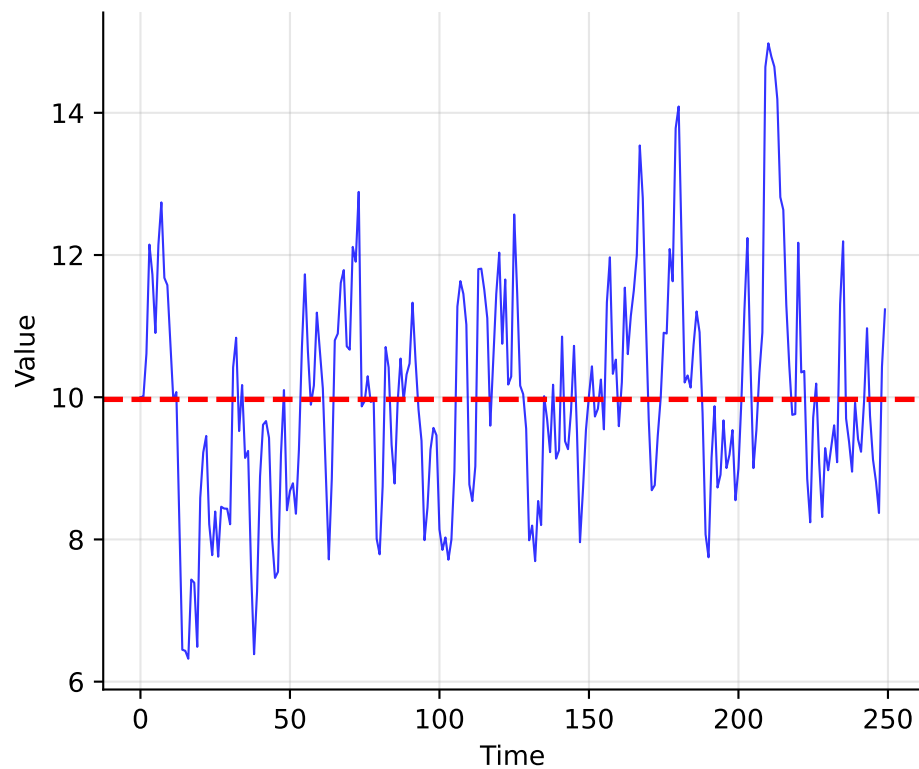
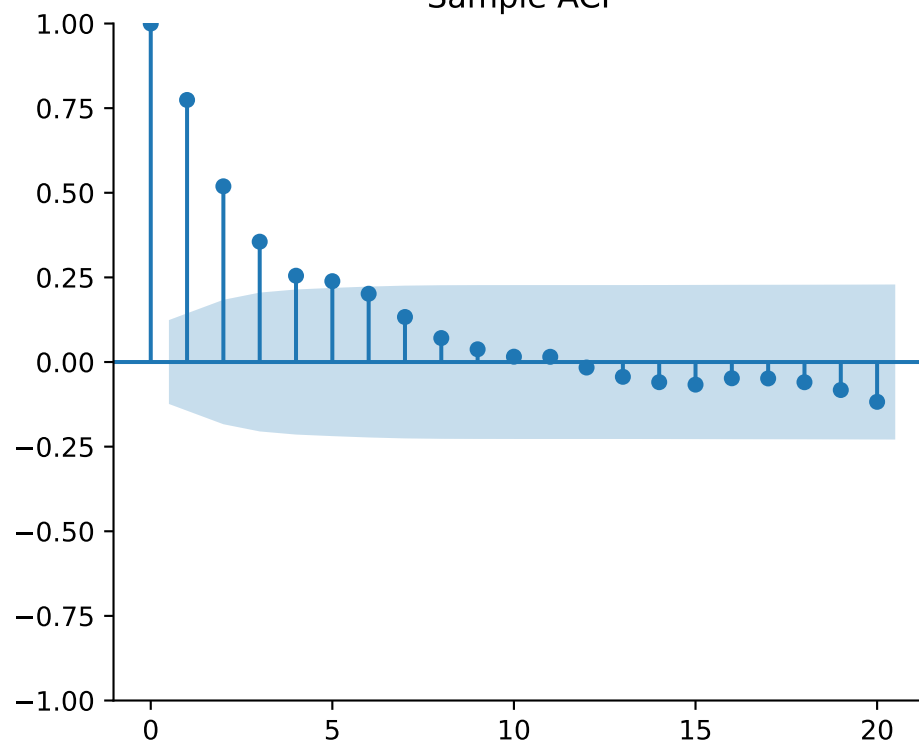


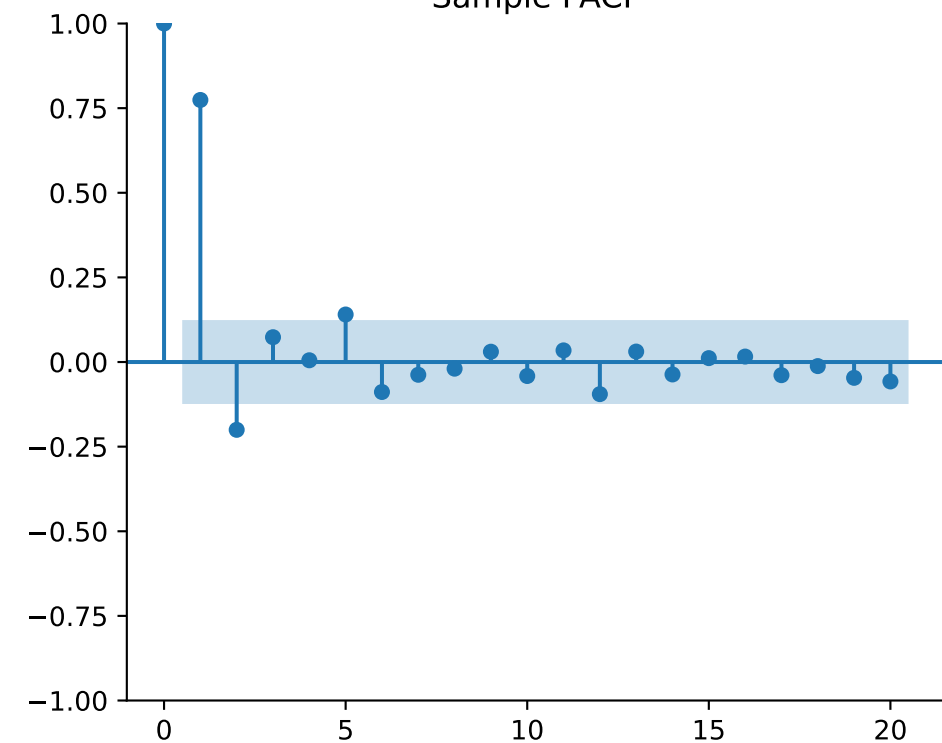
Time Series Data



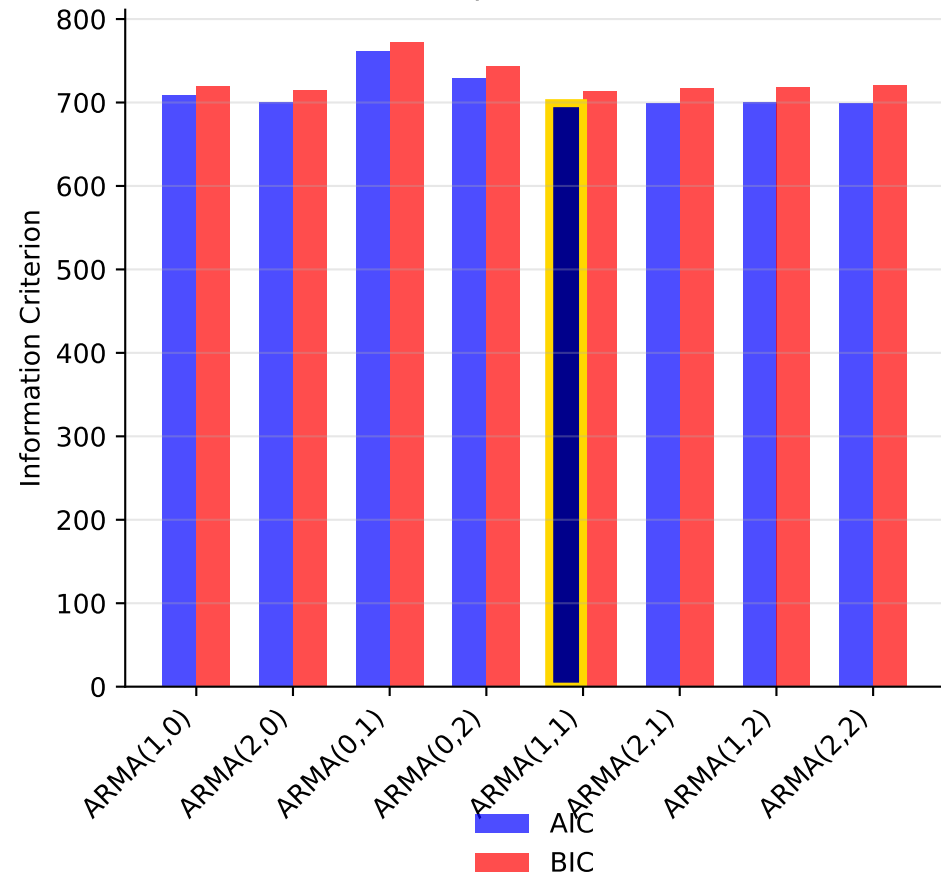
Sample ACF



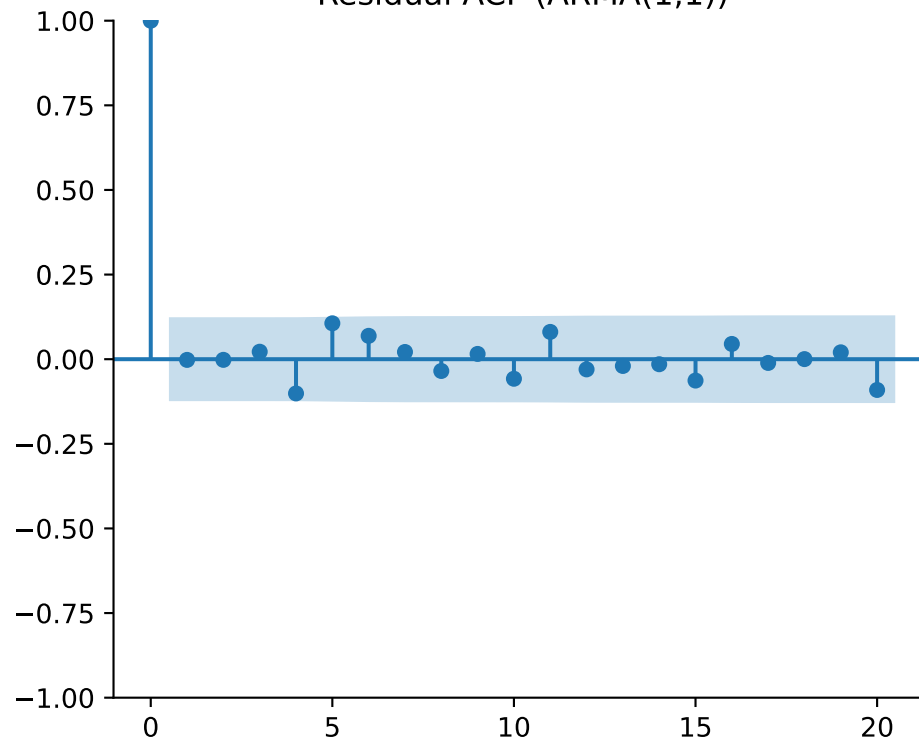
Sample PACF



Model Comparison: AIC vs BIC



Residual ACF (ARMA(1,1))



Model Selection Summary

Data: $n = 250$ observations
 Stationarity: Yes (ADF $p = 0.0005$)

Models Compared: 8

Best by AIC: ARMA(1,1)
 AIC = 699.21

Best by BIC: ARMA(1,1)
 BIC = 713.30

Selected Model: ARMA(1,1)

(True DGP: ARMA(1,1) with $\phi=0.7$, $\theta=0.3$)

Residual Diagnostics:

Ljung-Box (lag 10): $p = 0.6055$
 ✓ White noise

Conclusion:

Model selection correctly identified the true model structure!