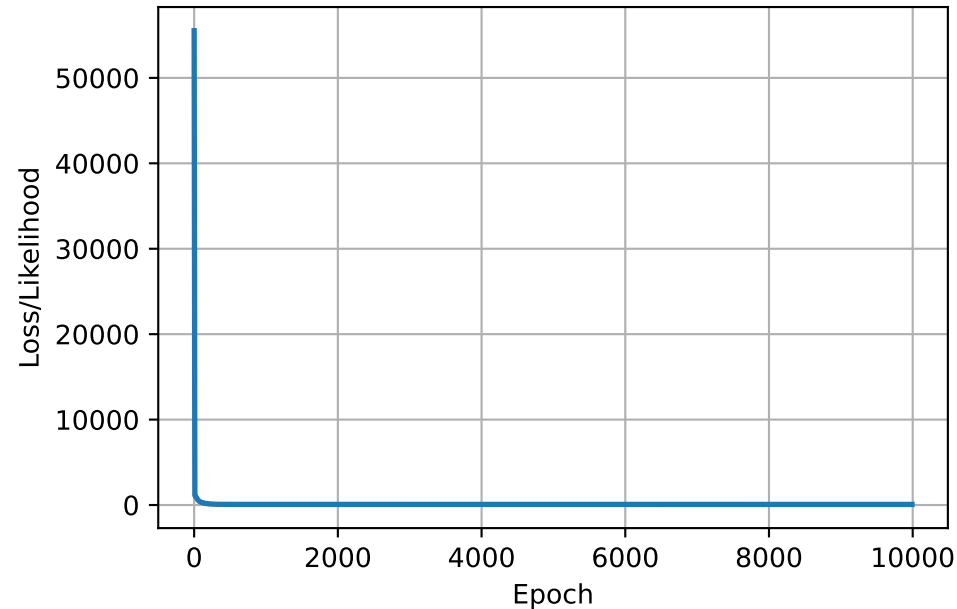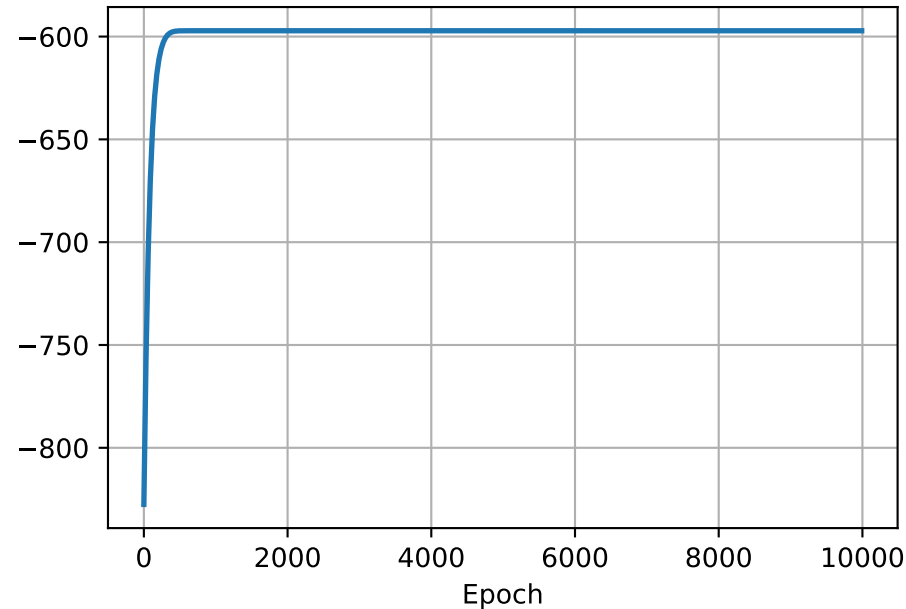AR Error, BTL Likelihood, and Total Likelihood Over Time