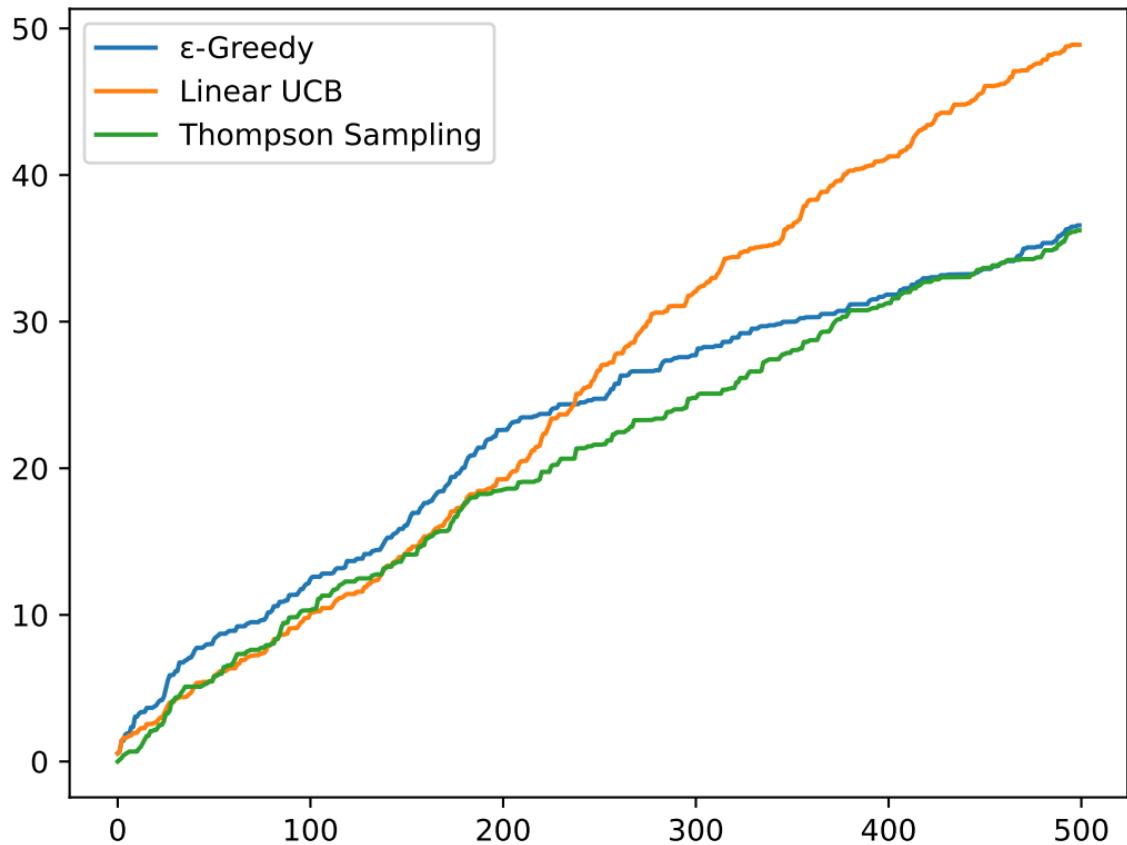
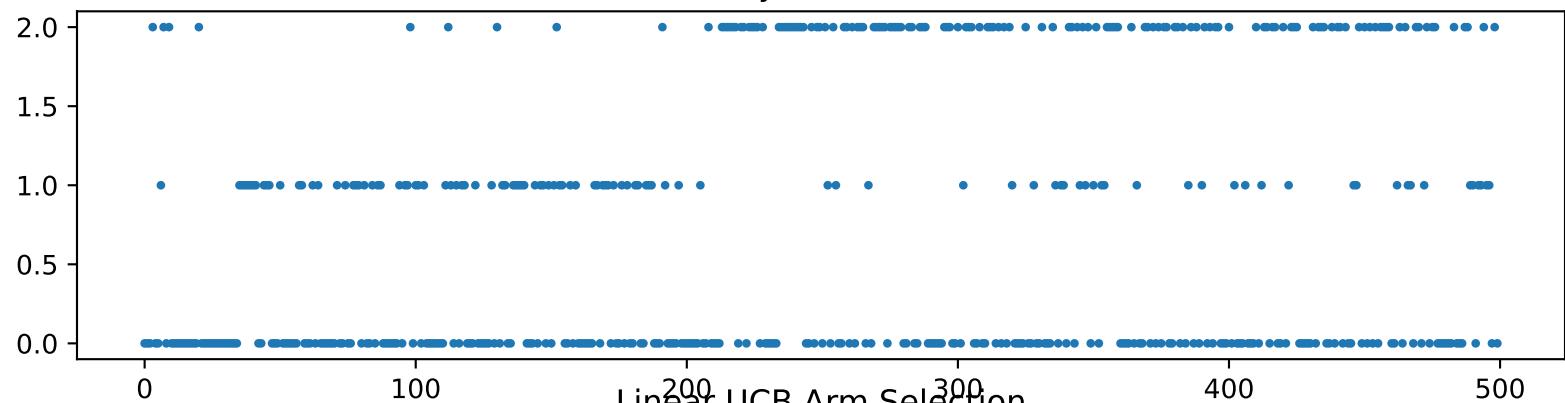


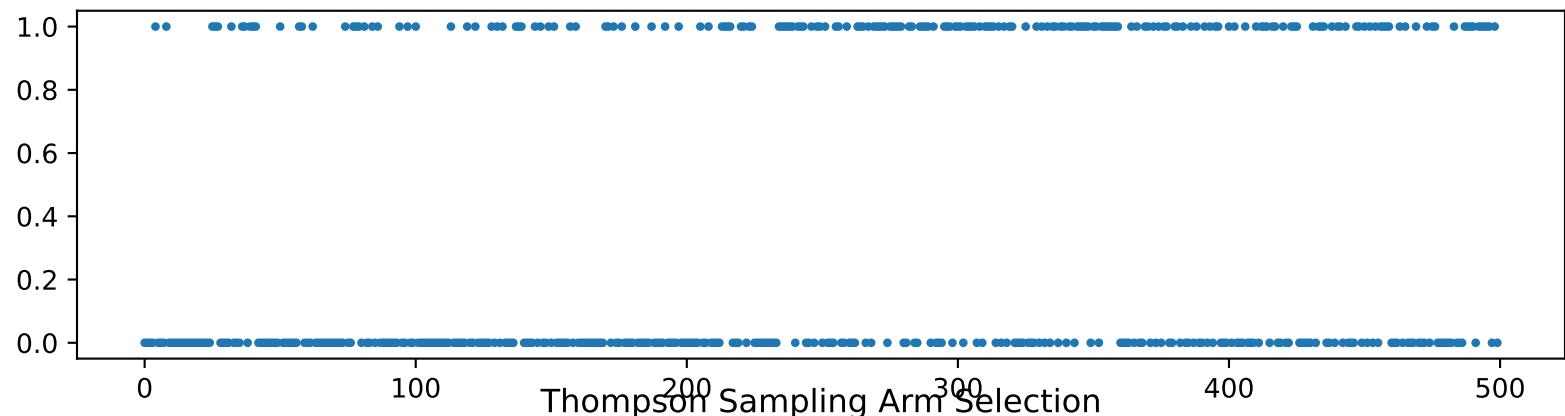
## Cumulative Regret Comparison



$\epsilon$ -Greedy Arm Selection



Linear UCB Arm Selection



Thompson Sampling Arm Selection

