

Simulation statistics

total_duration = 249.8677
arrival_rate_mean = 15.9990
interarrival_time_mean = 0.0625
response_time
 mean = 0.0200
 var = 0.0004
 p50 = 0.0137
 p75 = 0.0276
 p90 = 0.0465
 p95 = 0.0613
 p99 = 0.0910
wait_time_mean = 0.0049
service_rate_mean = 66.0212
service_time_mean = 0.0151
num_jobs_in_system_mean = 0.3206
num_jobs_in_queue_mean = 0.0781
throughput_mean = 16.0000
utilization = 0.2425

Little's Law: $E[N] = \lambda * E[T]$

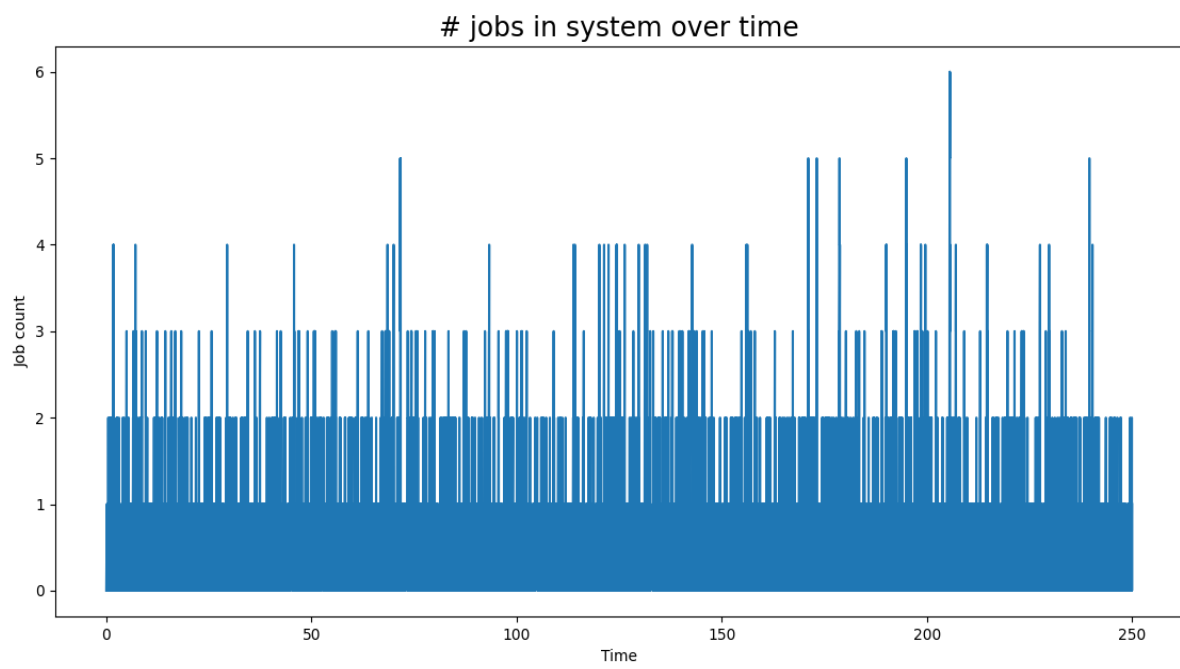
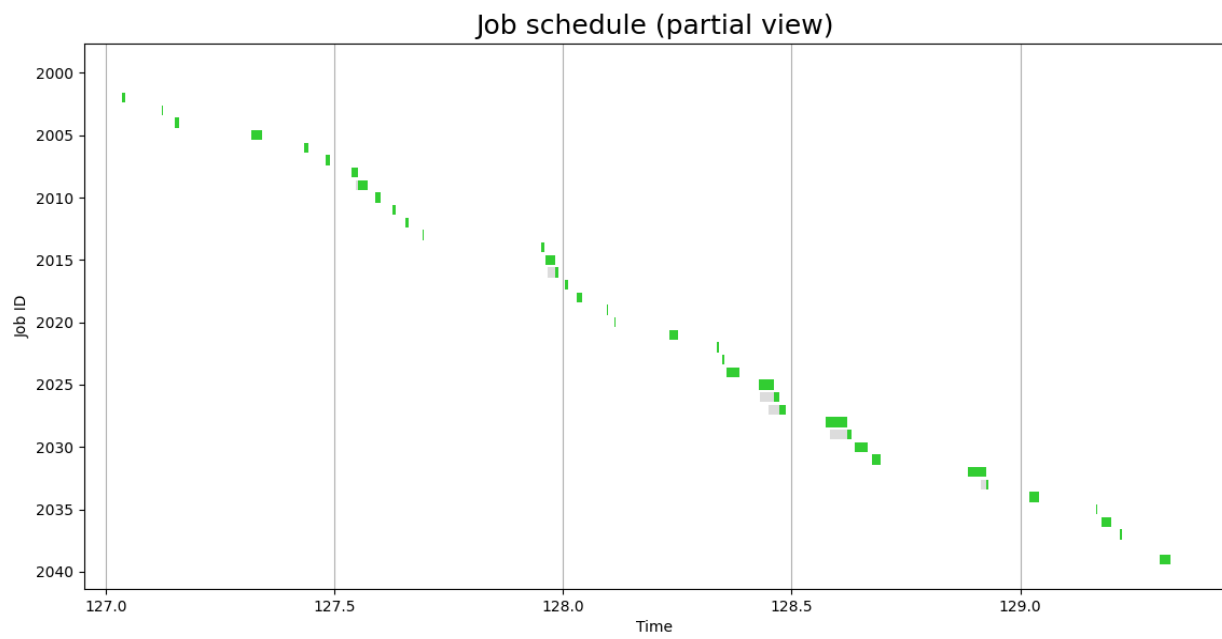
num_jobs_in_system_mean = 0.3206
arrival_rate_mean * response_time_mean = 0.3204 (= 15.9990 * 0.0200)

Utilization Law, version 1: $\rho_i = \lambda_i / \mu_i$

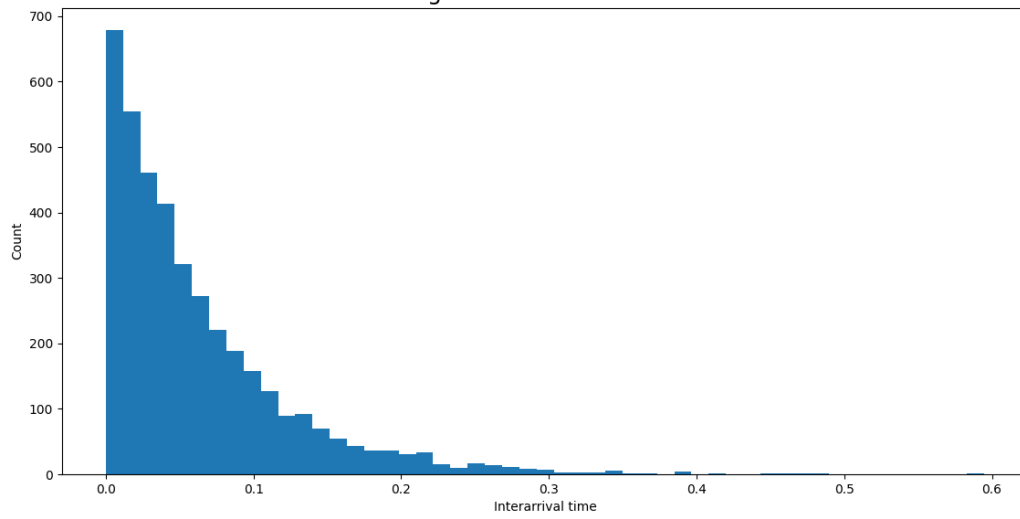
utilization = 0.2425
arrival_rate_mean = 15.9990
service_rate_mean = 66.0212
arrival_rate_mean / service_rate_mean = 0.2423 (= 15.9990 / 66.0212)

Utilization Law, version 2: $\rho_i = X_i * E[S]$

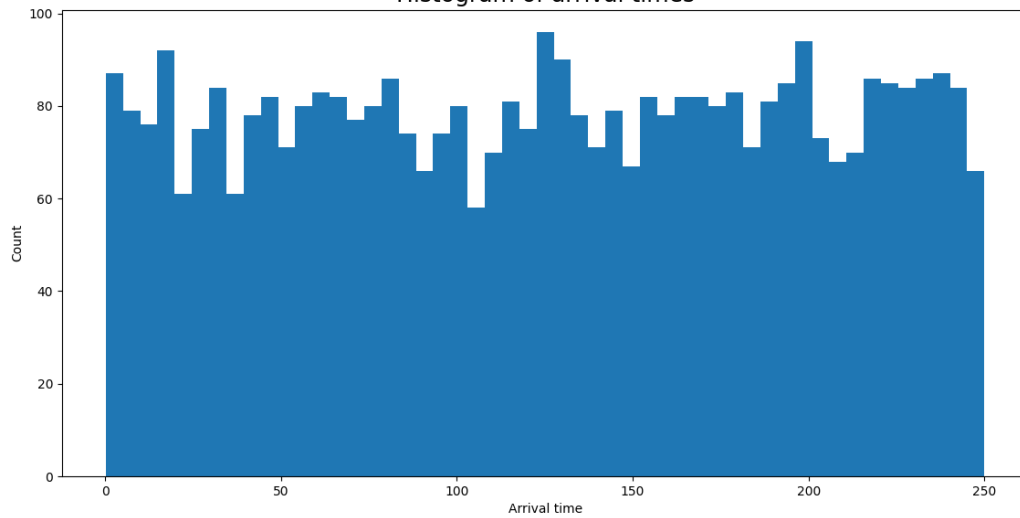
utilization = 0.2425
throughput_mean = 16.0000
service_time_mean = 0.0151
throughput_mean * service_time_mean = 0.2423 (= 16.0000 * 0.0151)



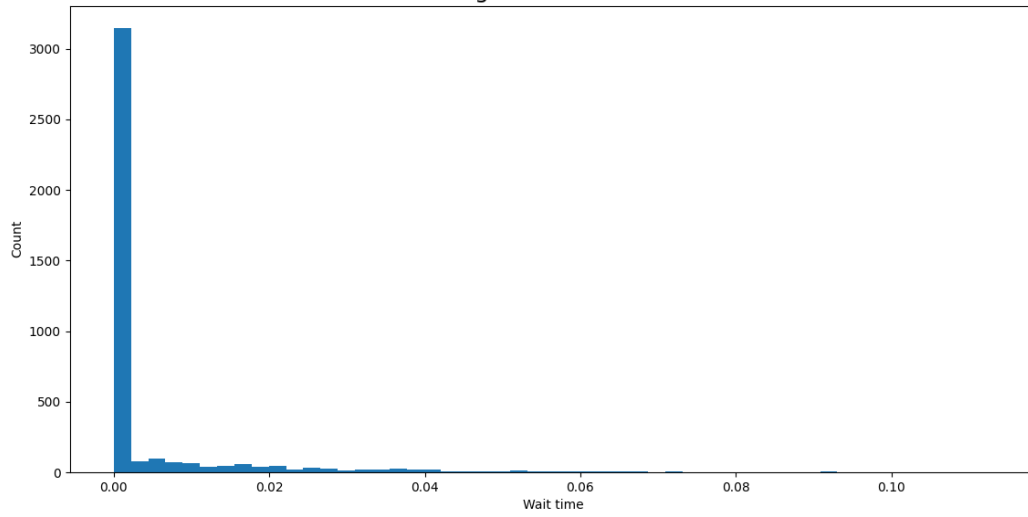
Histogram of interarrival times



Histogram of arrival times



Histogram of wait times



Histogram of service times

