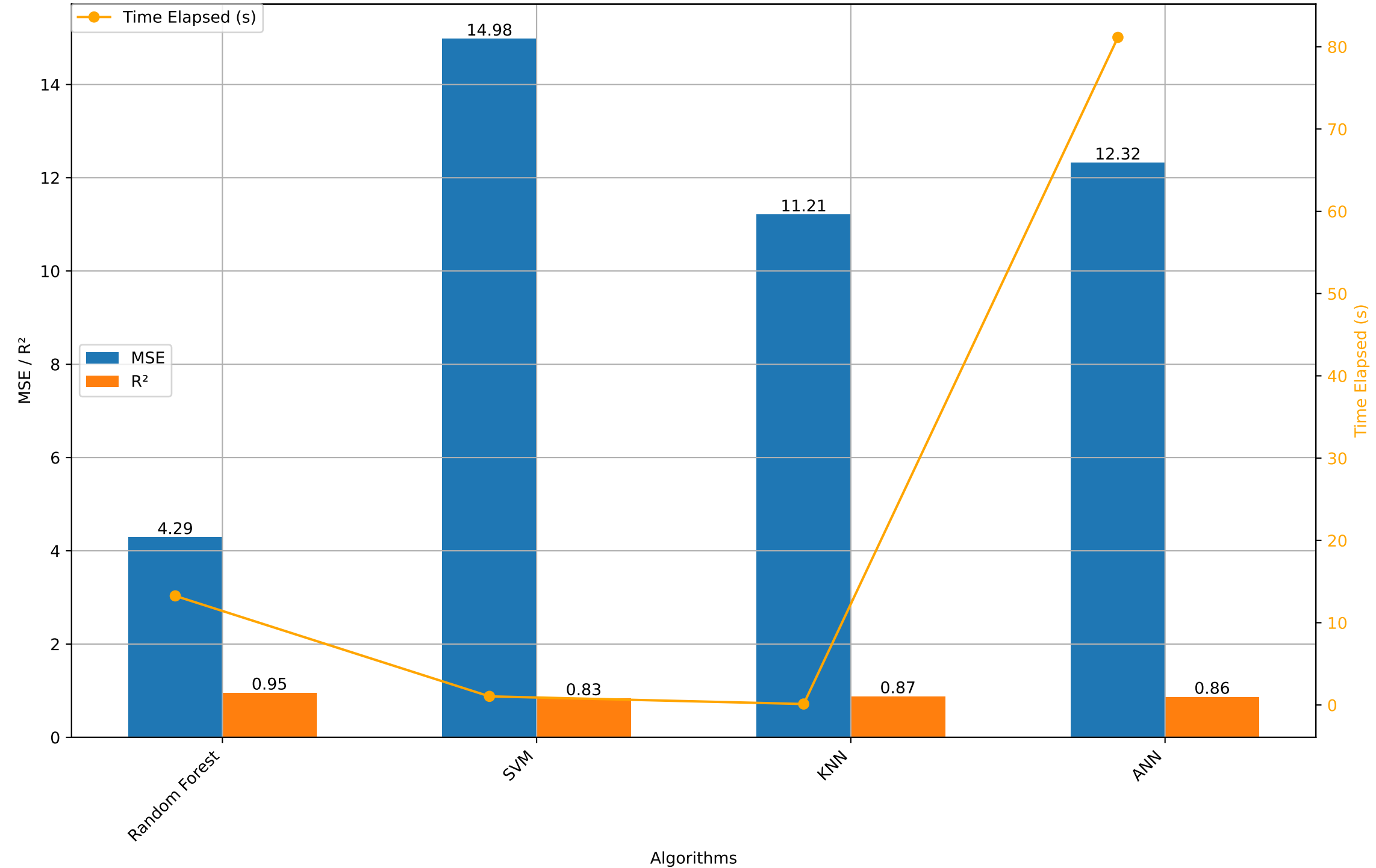
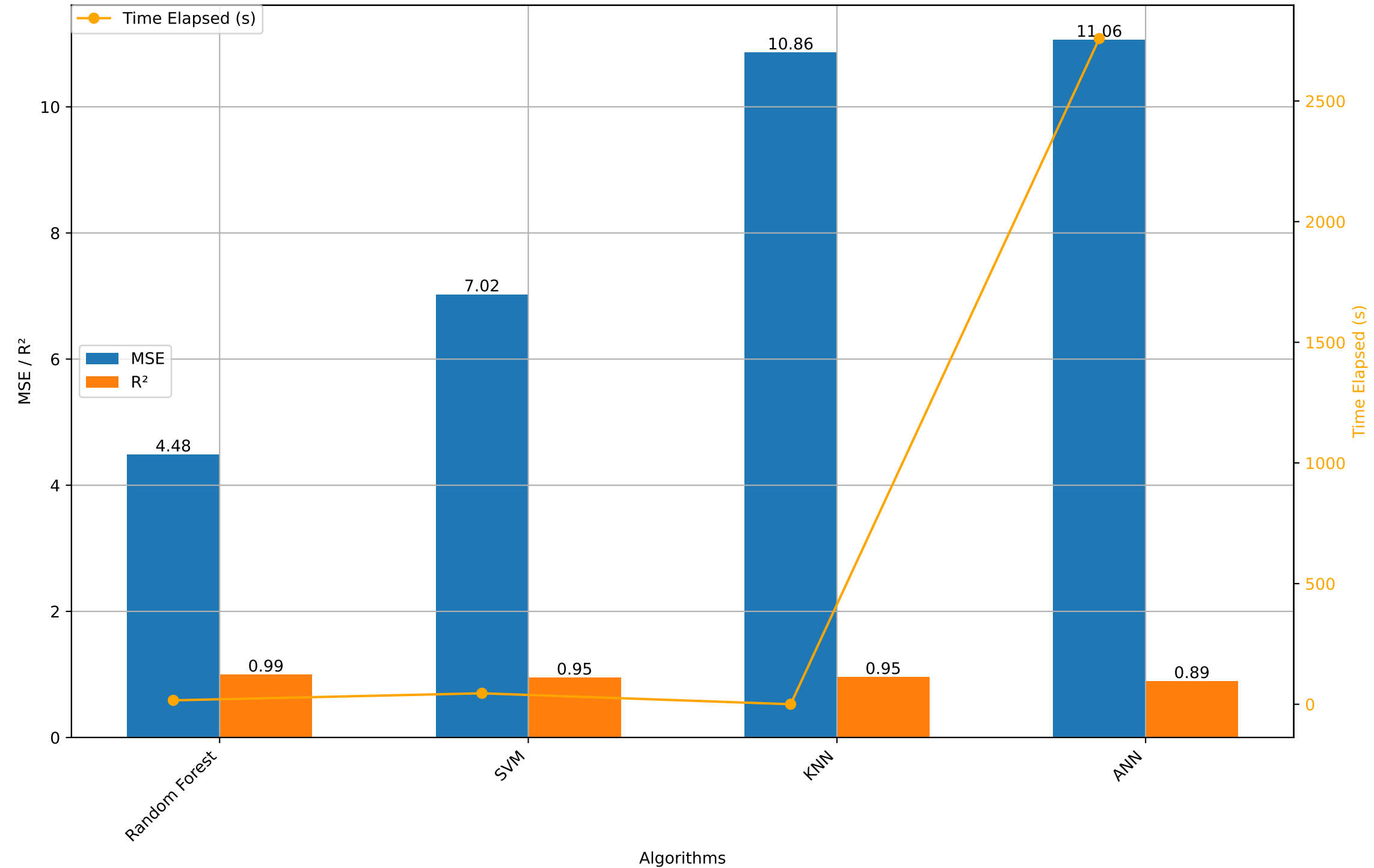
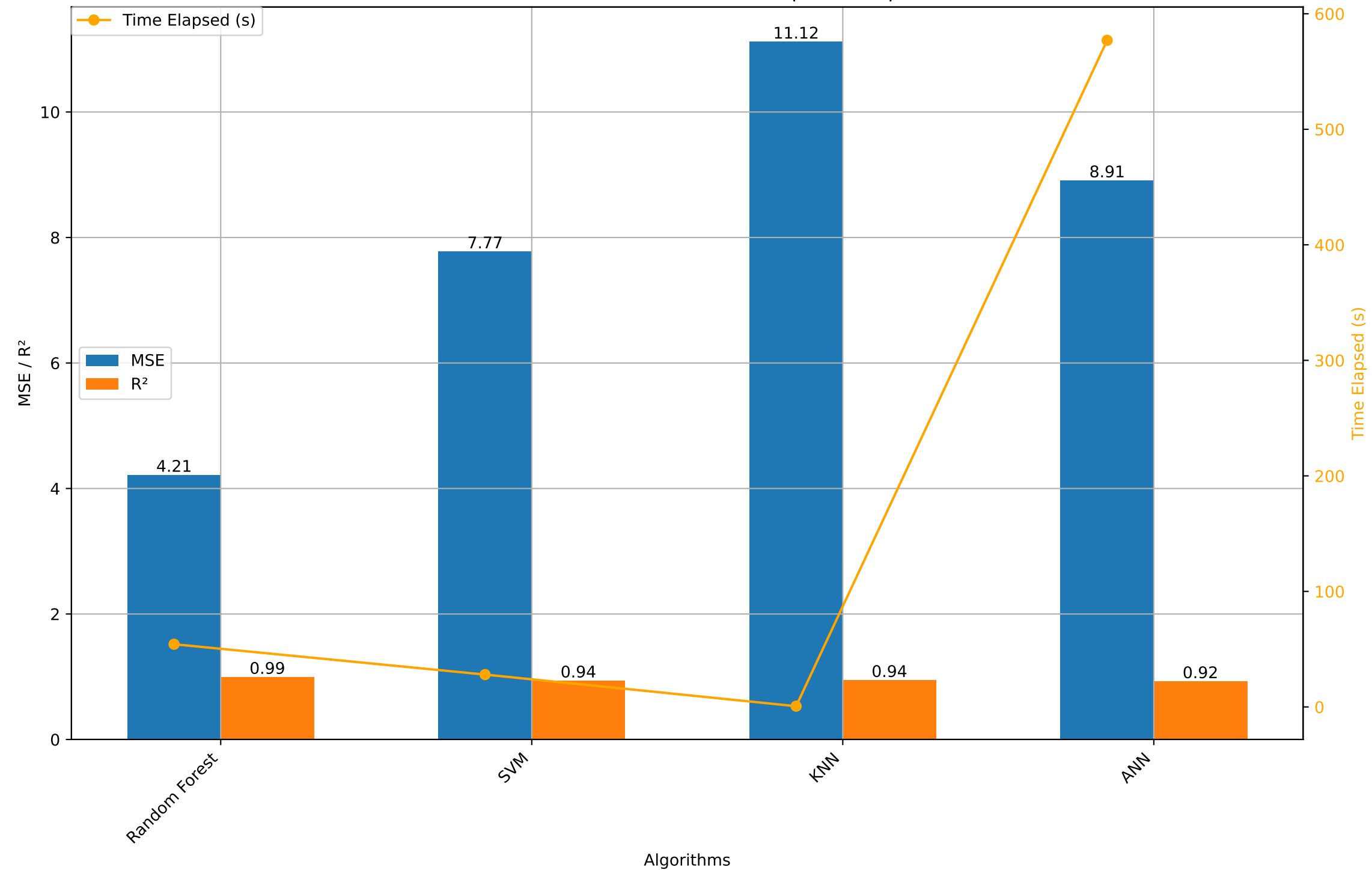


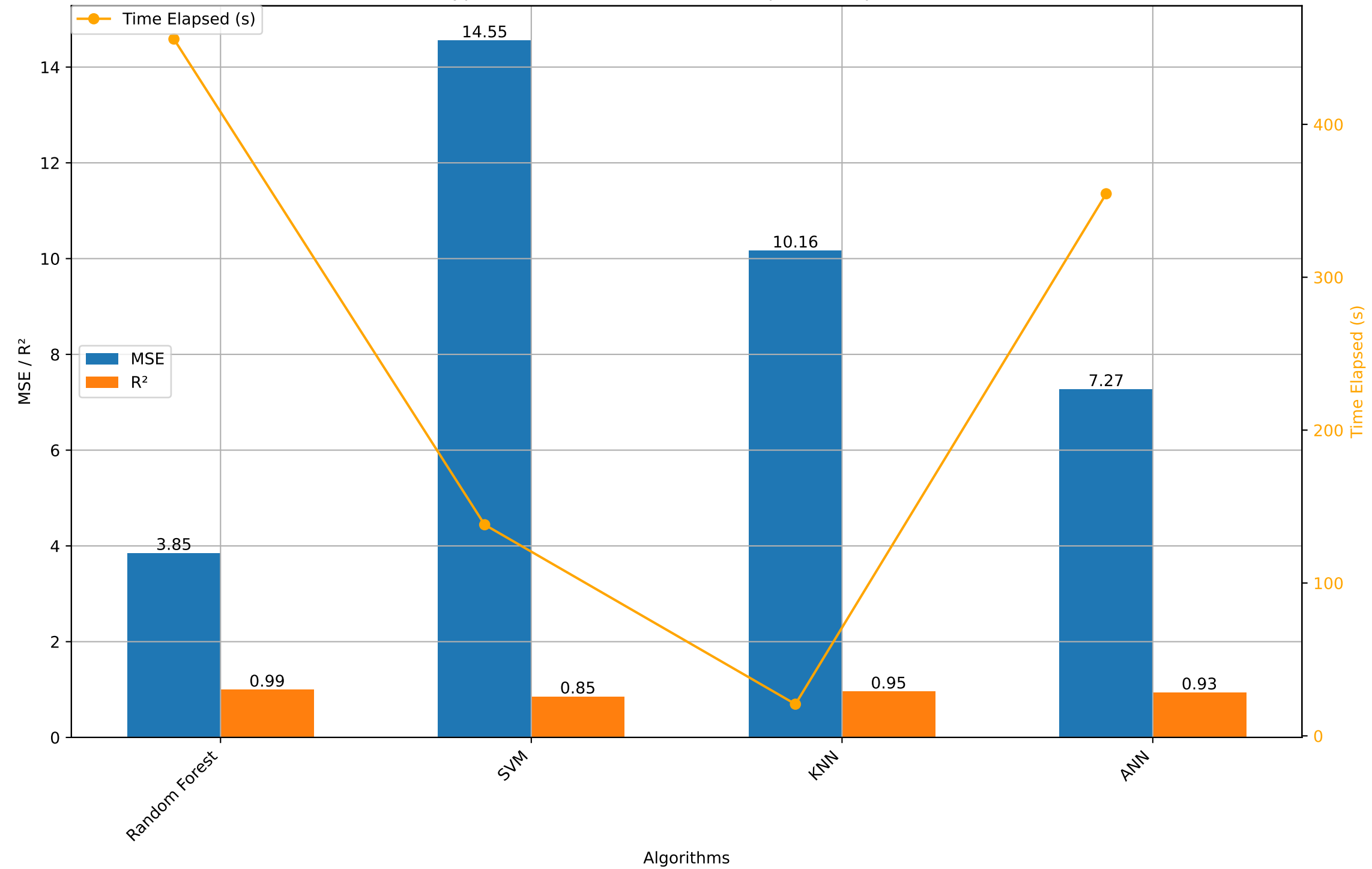
# 3\_fold\_cross\_validation - MSE, R<sup>2</sup> and Time Elapsed Comparison



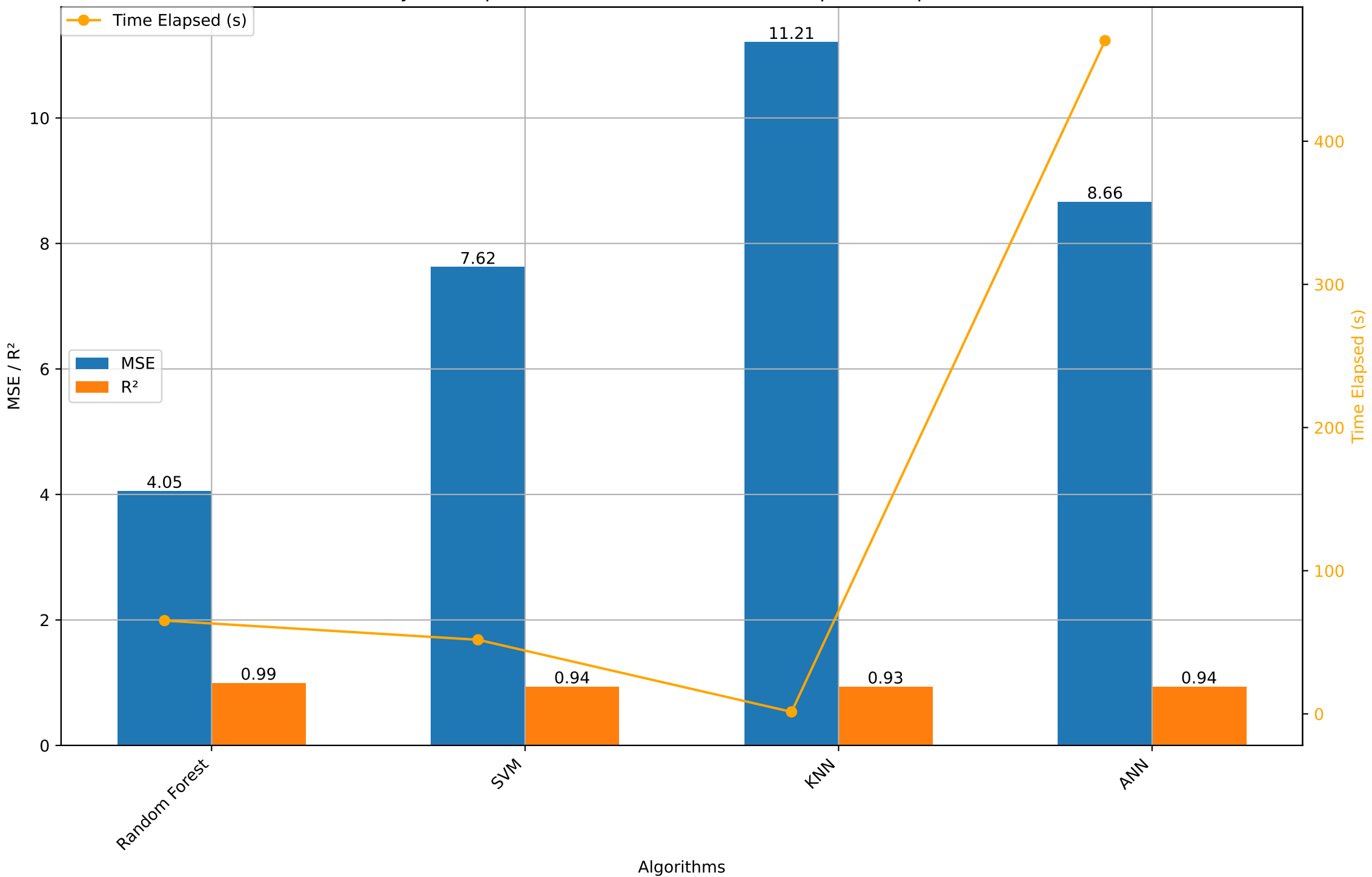
Grid Search - MSE, R<sup>2</sup> and Time Elapsed Comparison

Random Search - MSE, R<sup>2</sup> and Time Elapsed Comparison

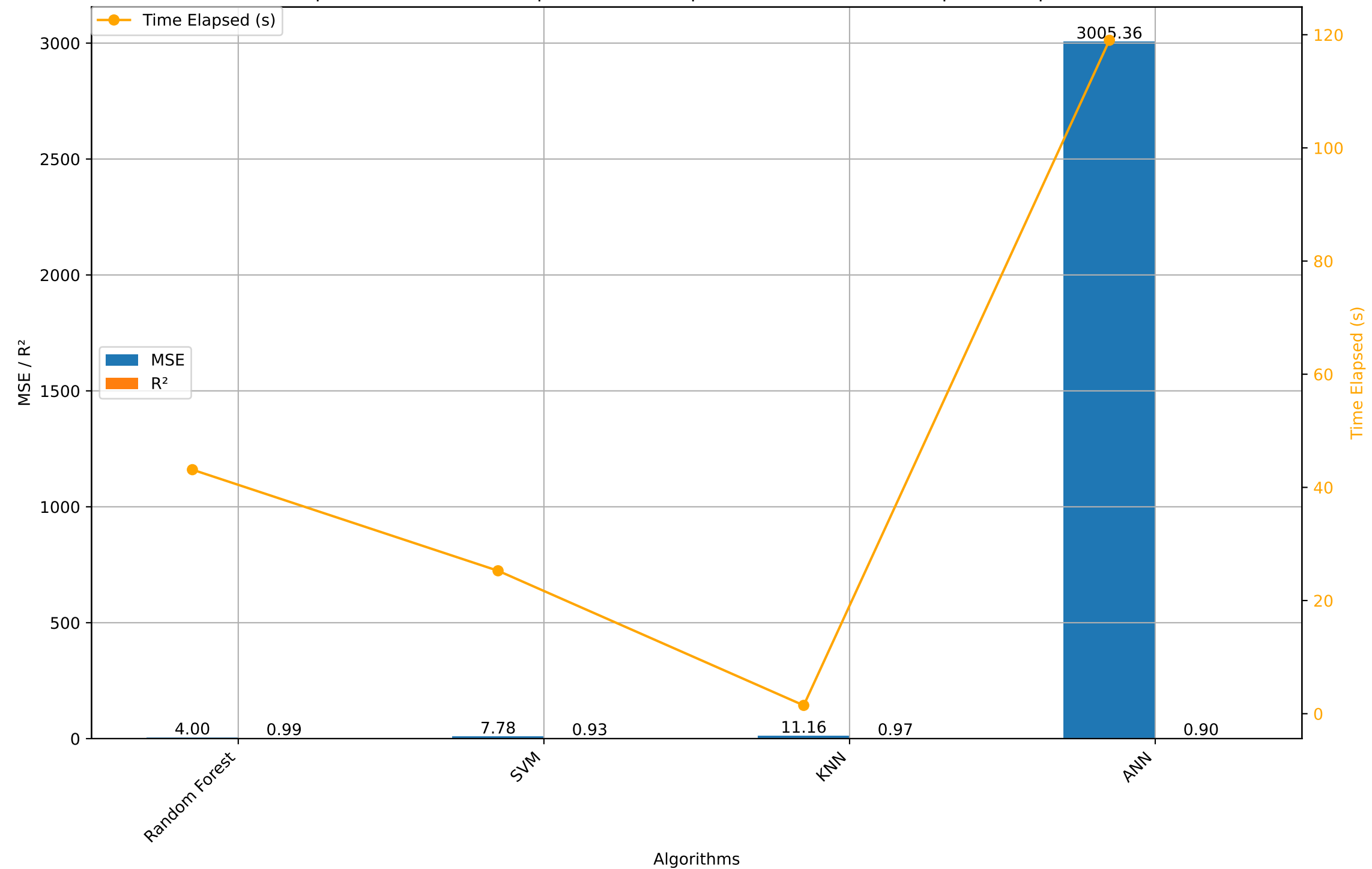


Hyperband - MSE, R<sup>2</sup> and Time Elapsed Comparison

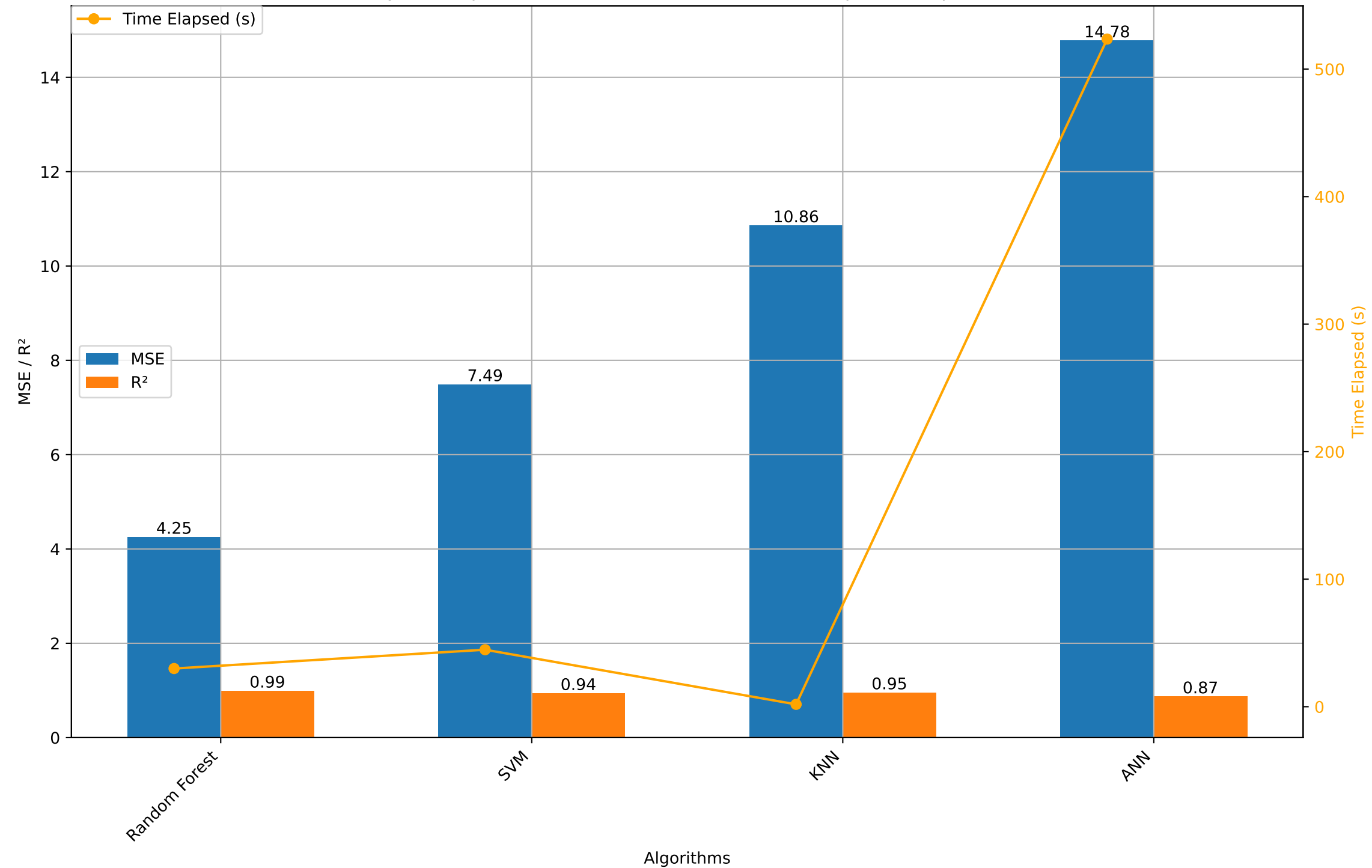
# Bayesian Optimization - MSE, R<sup>2</sup> and Time Elapsed Comparison

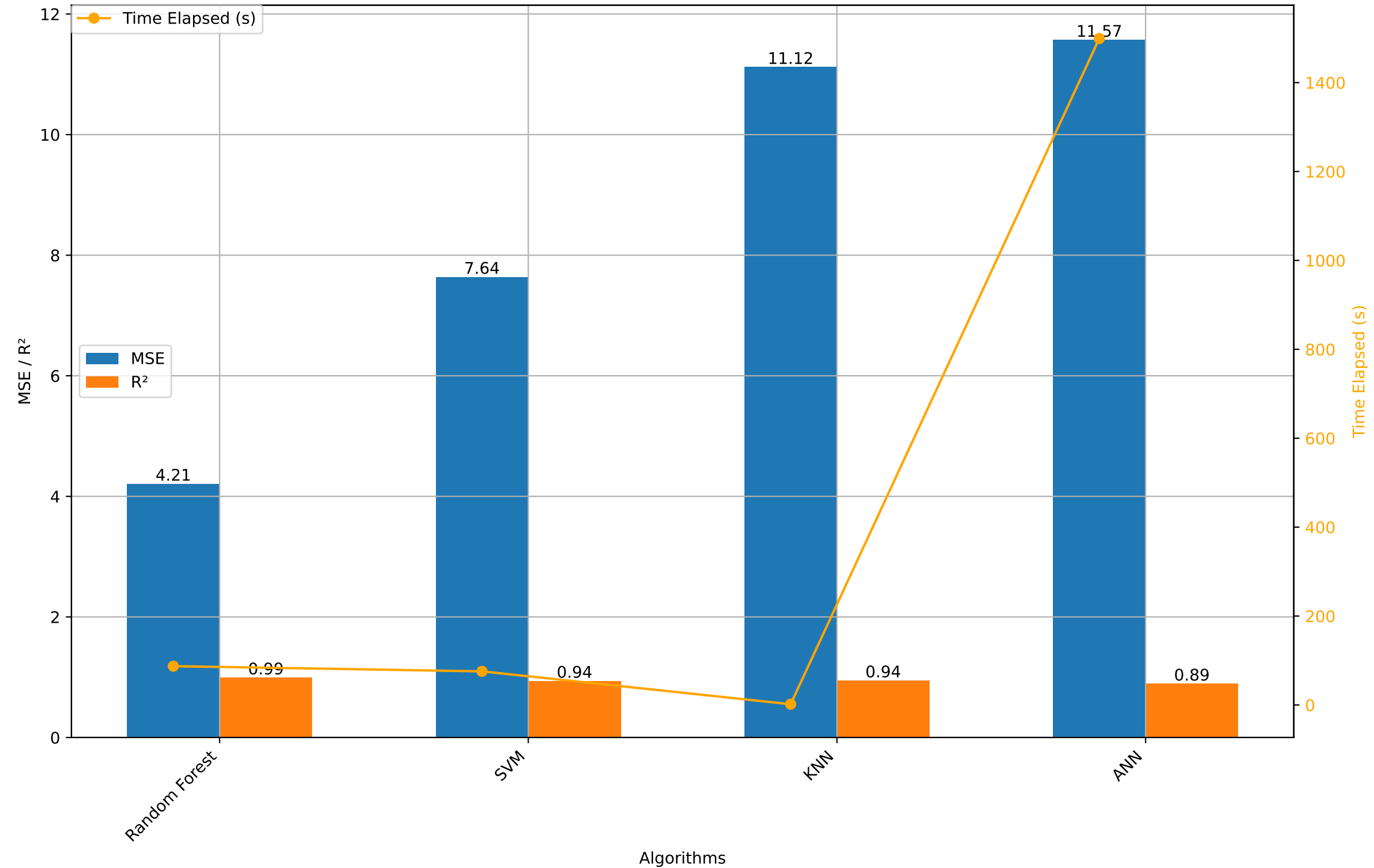


Sequential Model-Based Optimization (skopt) - MSE, R<sup>2</sup> and Time Elapsed Comparison

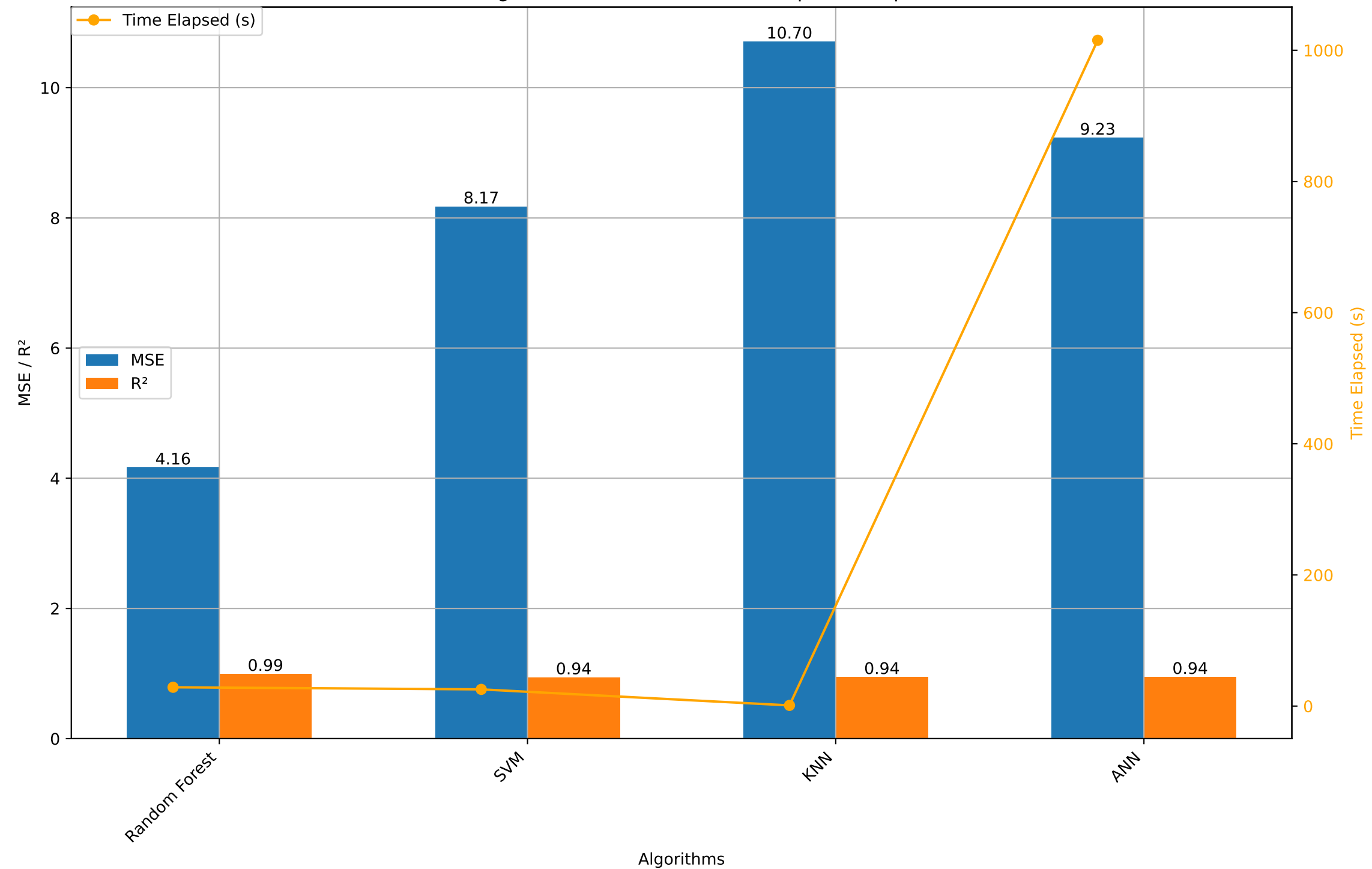


Bayesian Optimization TPE - MSE, R<sup>2</sup> and Time Elapsed Comparison

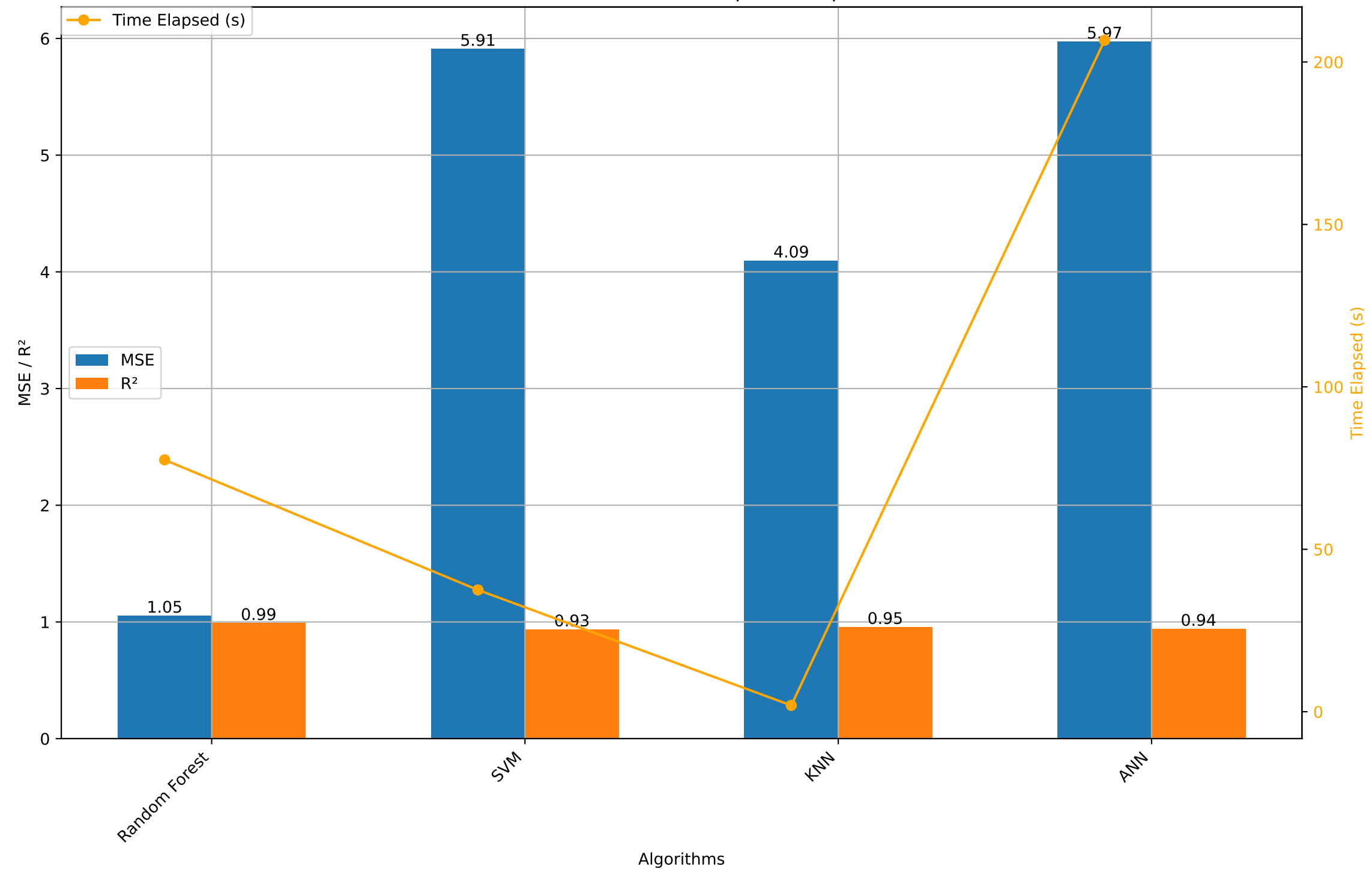


Particle Swarm Optimization - MSE, R<sup>2</sup> and Time Elapsed Comparison



Genetic Algorithm - MSE, R<sup>2</sup> and Time Elapsed Comparison

TPOT - MSE, R<sup>2</sup> and Time Elapsed Comparison



Best Algorithm and Procedure Summary:

Procedure	MSE Winner	MSE Value	R² Winner	R² Value	Time Winner	Time Elapsed (s)
3_fold_cross_validation	Random Forest	4.287504674863272	Random Forest	0.952787049402208	KNN	0.12
Grid Search	Random Forest	4.483252077072286	Random Forest	0.9934699483692684	KNN	0.16
Random Search	Random Forest	4.213417315535035	Random Forest	0.9932053618494175	KNN	0.64
Hyperband	Random Forest	3.847271730567848	Random Forest	0.9931020897661416	KNN	20.73
Bayesian Optimization	Random Forest	4.052005285632713	Random Forest	0.994387192469466	KNN	1.39
Sequential Model-Based Optimization (skopt)	Random Forest	3.997250557993263	Random Forest	0.9945847676926336	KNN	1.47
Bayesian Optimization TPE	Random Forest	4.252359354514488	Random Forest	0.9912239421284696	KNN	1.84
Particle Swarm Optimization	Random Forest	4.205187791371535	Random Forest	0.9918373829760722	KNN	1.59
Genetic Algorithm	Random Forest	4.161121040605638	Random Forest	0.9902607059614262	KNN	1.08
TPOT	Random Forest	1.0512209852127232	Random Forest	0.9882760096580068	KNN	1.95

Overall Best Algorithm and Procedure:

Procedure	MSE Winner	MSE Value	R <sup>2</sup> Winner	R <sup>2</sup> Value	Time Winner	Time Elapsed (s)
Sequential Model-Based Optimization (skopt)	Random Forest	3.997250557993263	Random Forest	0.9945847676926336	KNN	1.47