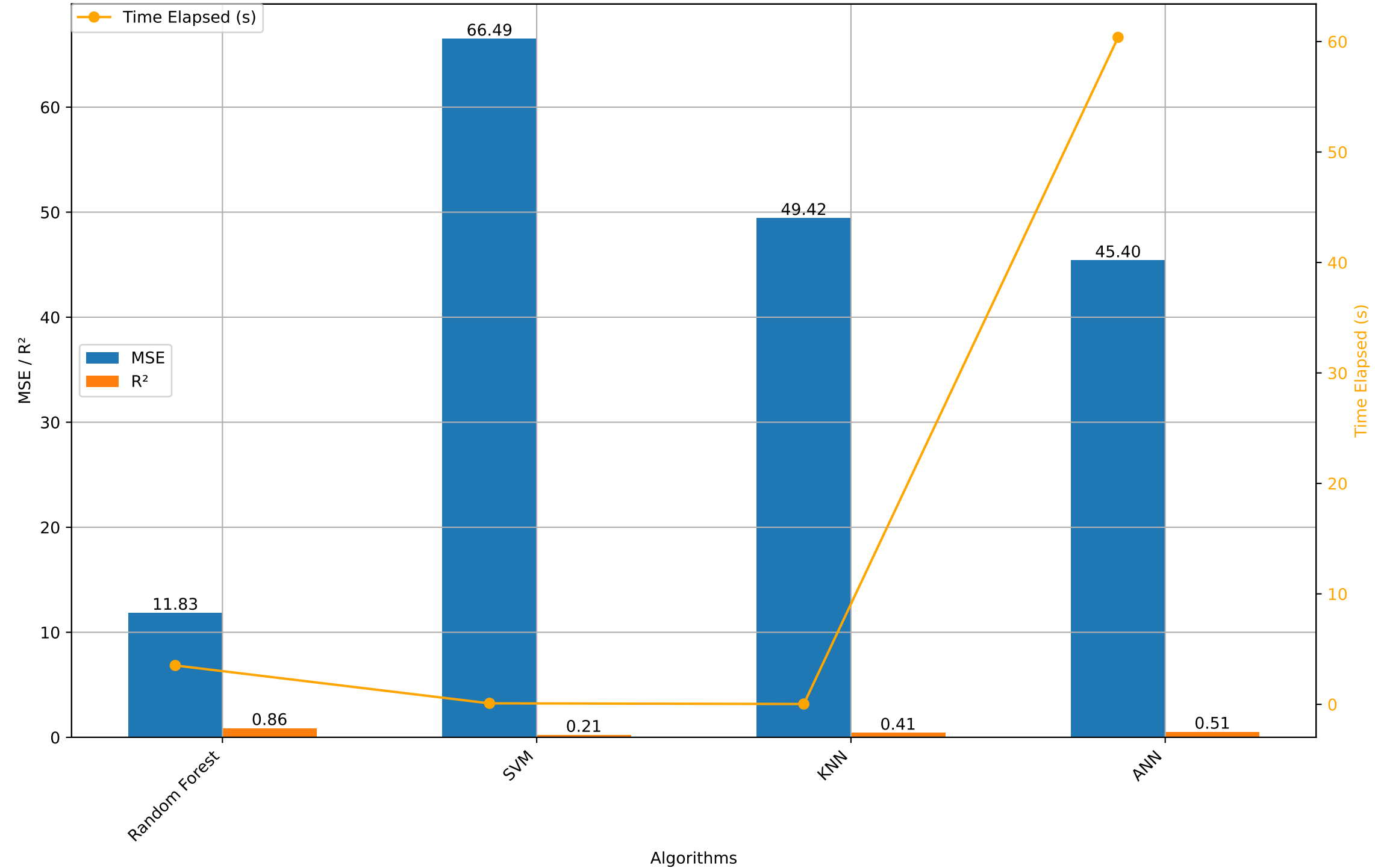
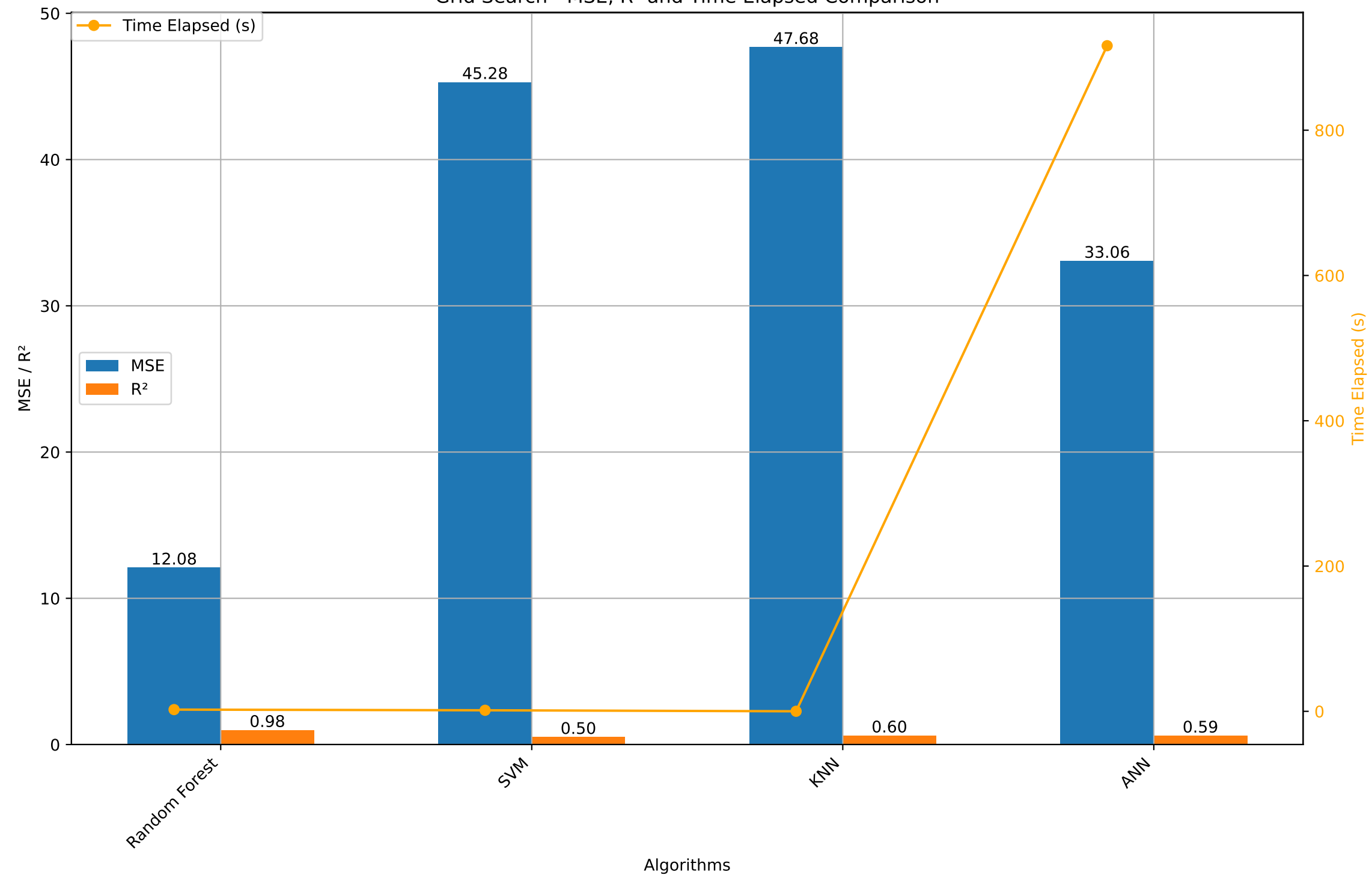


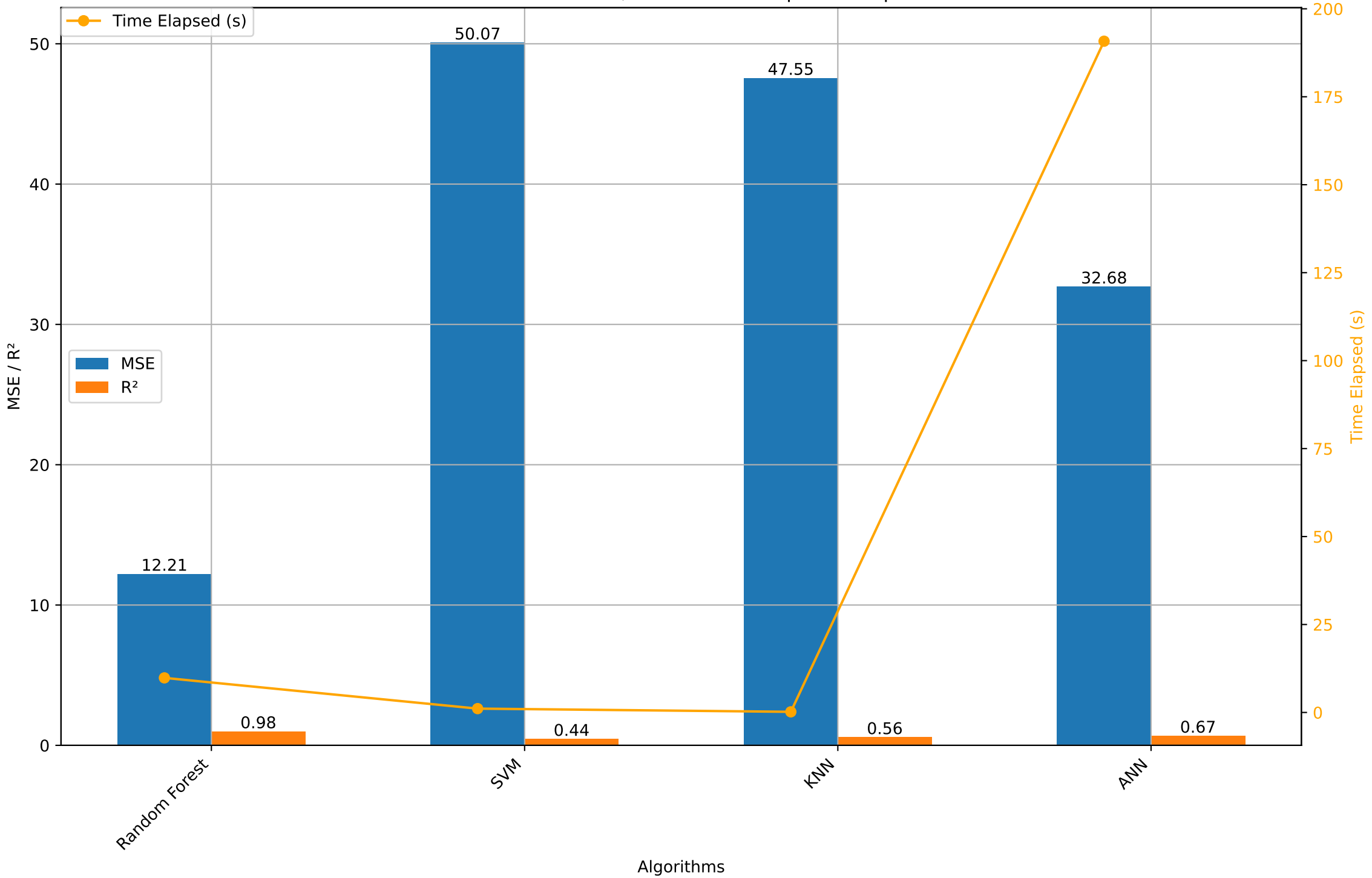
# 3\_fold\_cross\_validation - MSE, R<sup>2</sup> and Time Elapsed Comparison

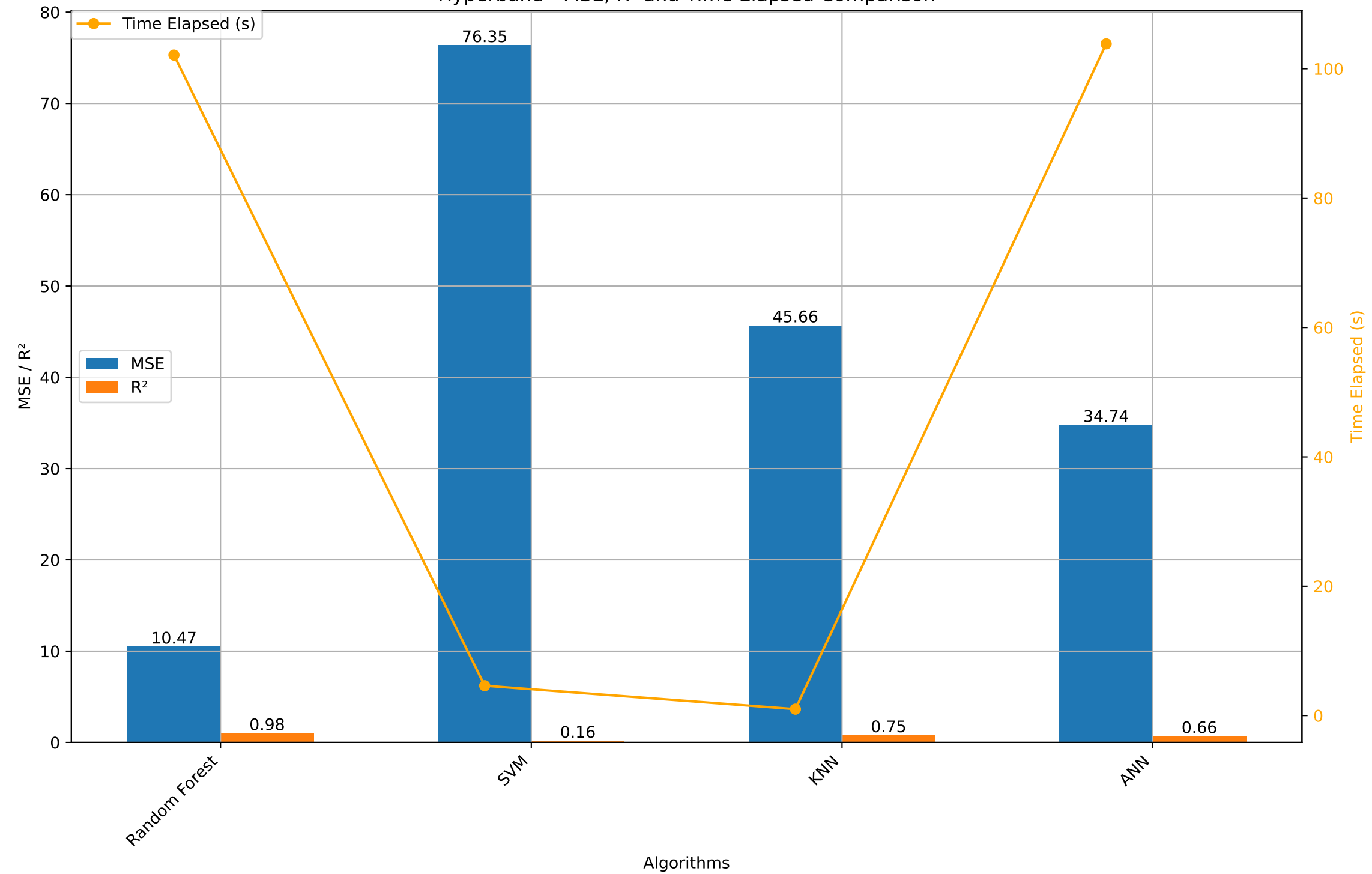


Grid Search - MSE, R<sup>2</sup> and Time Elapsed Comparison

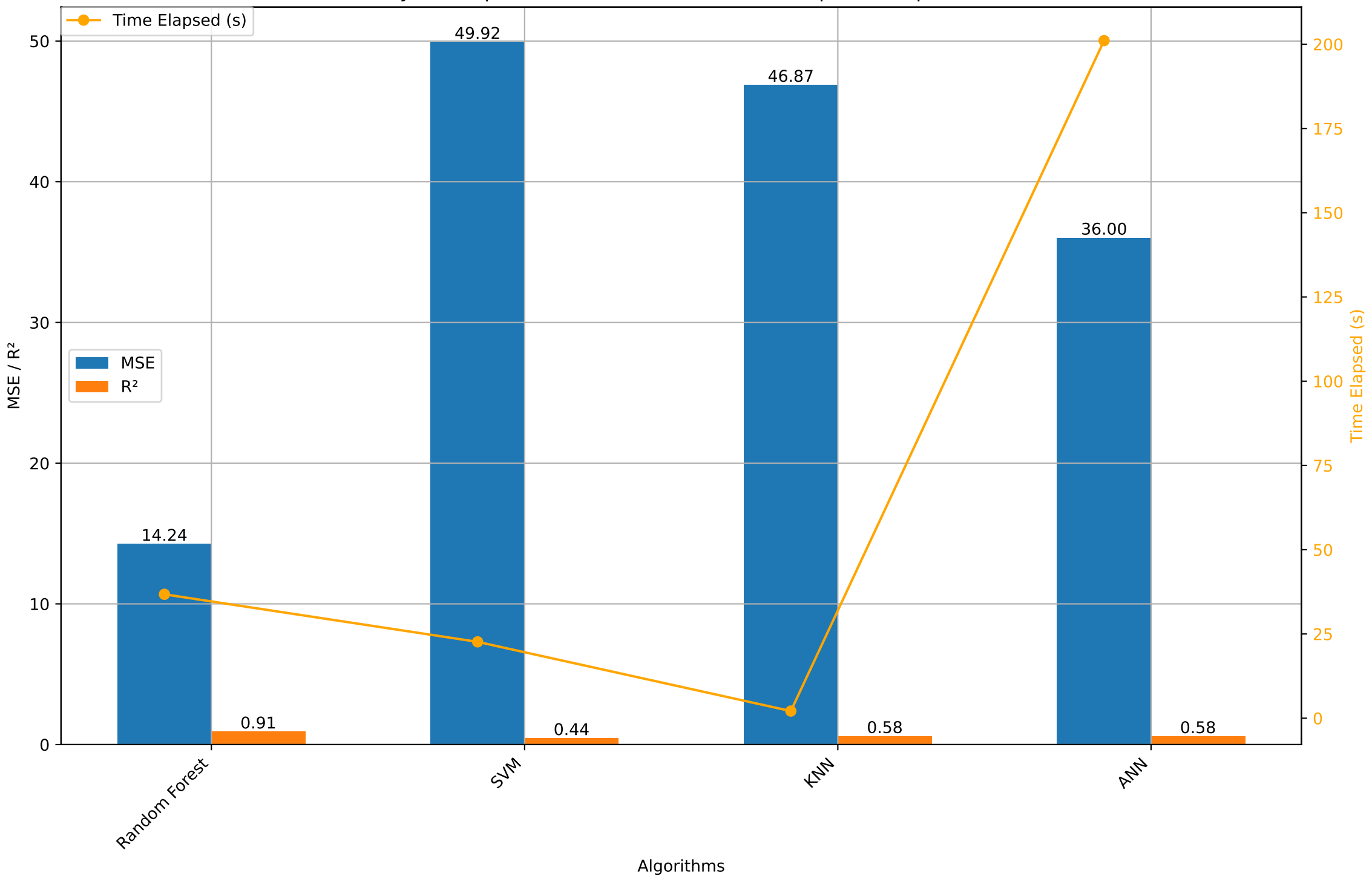


Random Search - MSE, R<sup>2</sup> and Time Elapsed Comparison

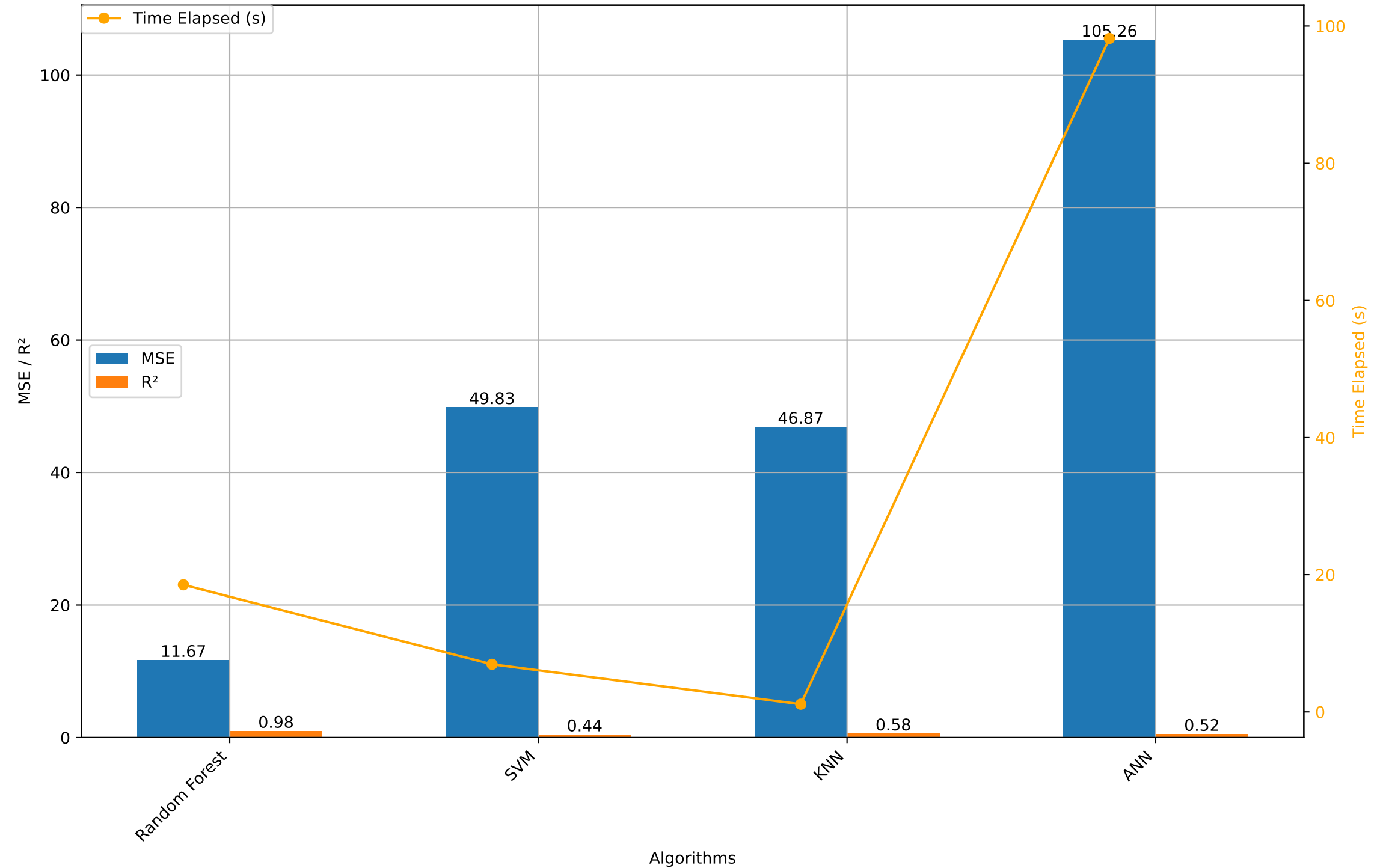


Hyperband - MSE, R<sup>2</sup> and Time Elapsed Comparison

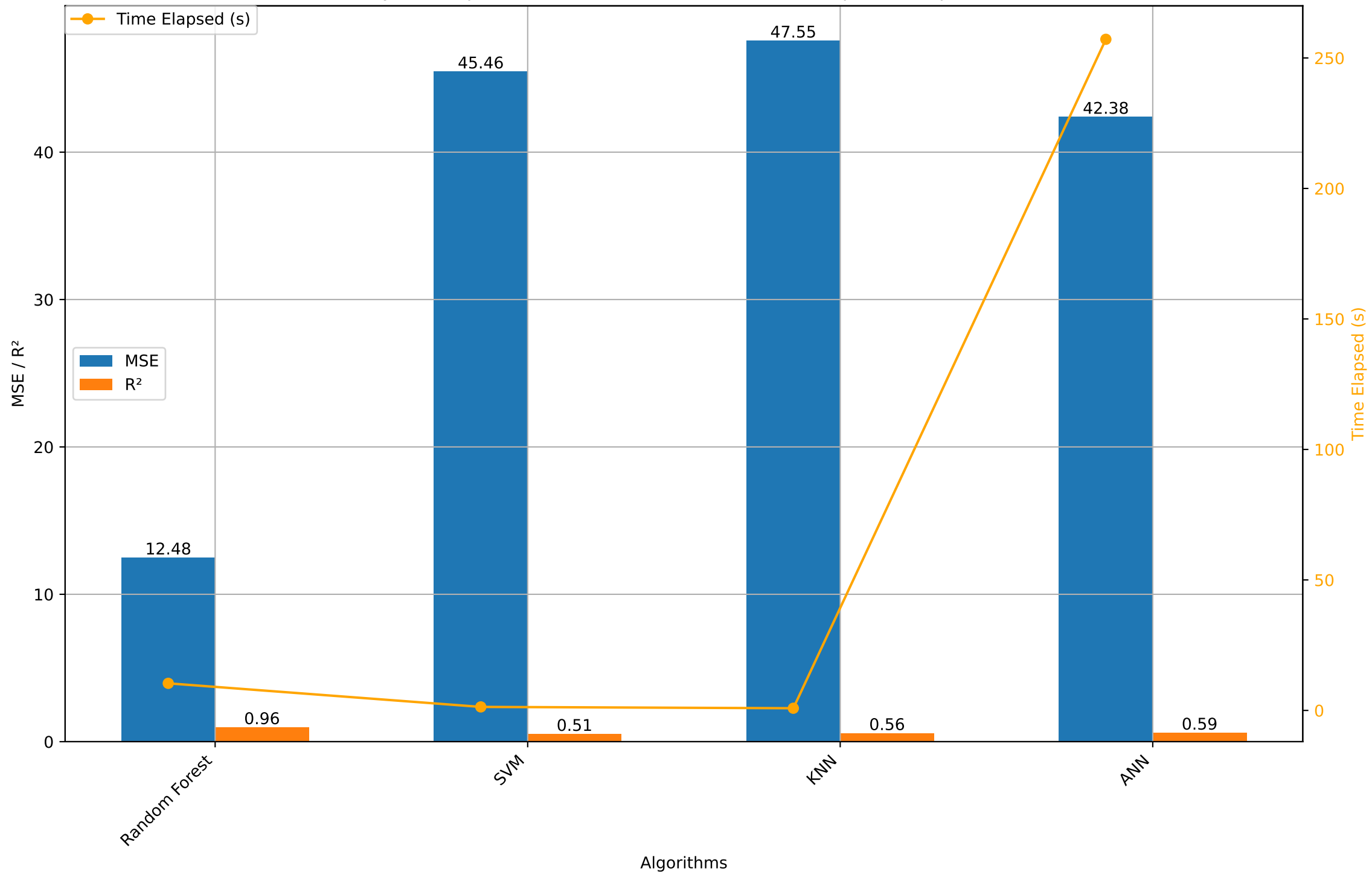
# Bayesian Optimization - MSE, R<sup>2</sup> and Time Elapsed Comparison

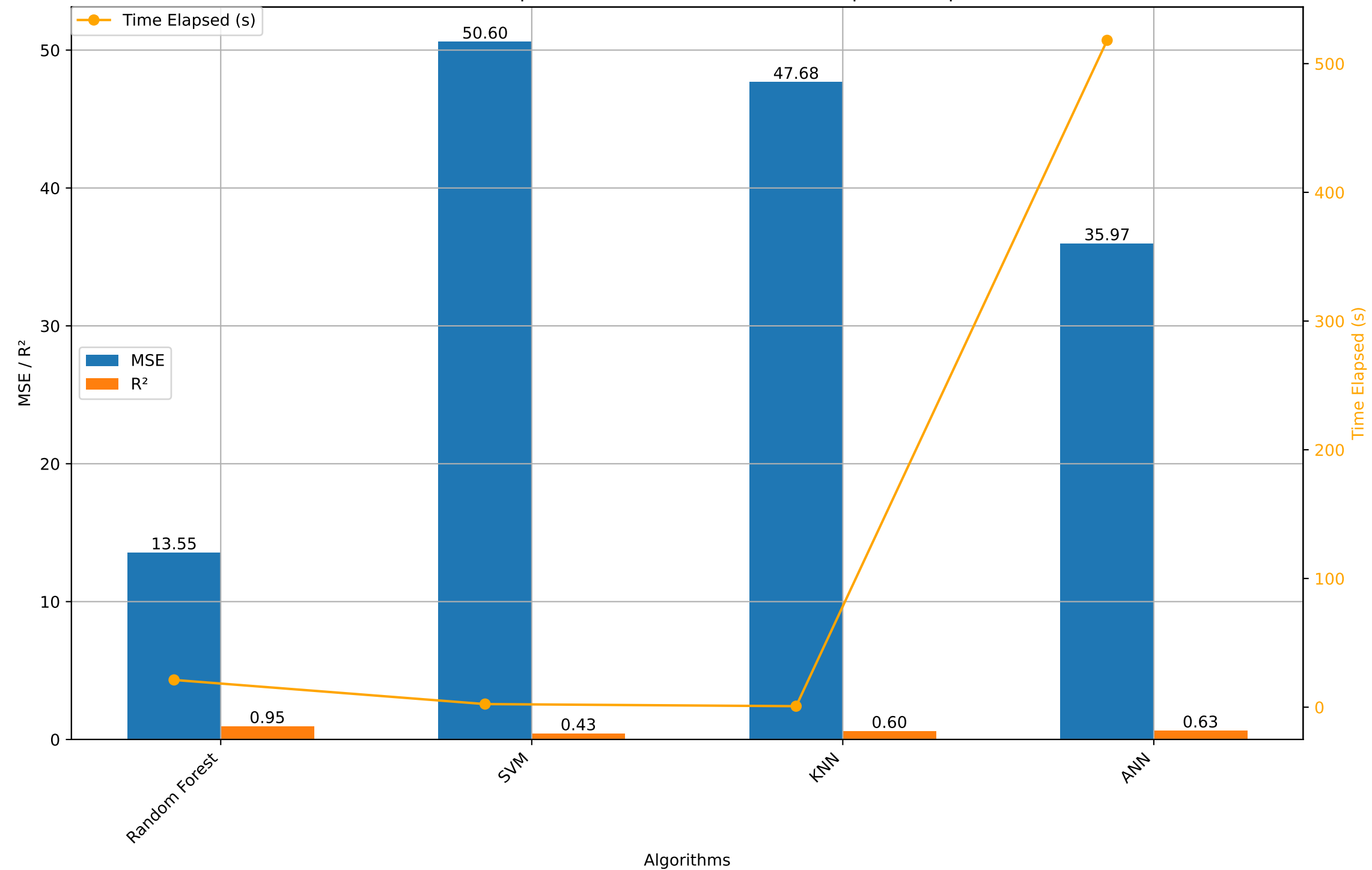


Sequential Model-Based Optimization (skopt) - MSE, R<sup>2</sup> and Time Elapsed Comparison

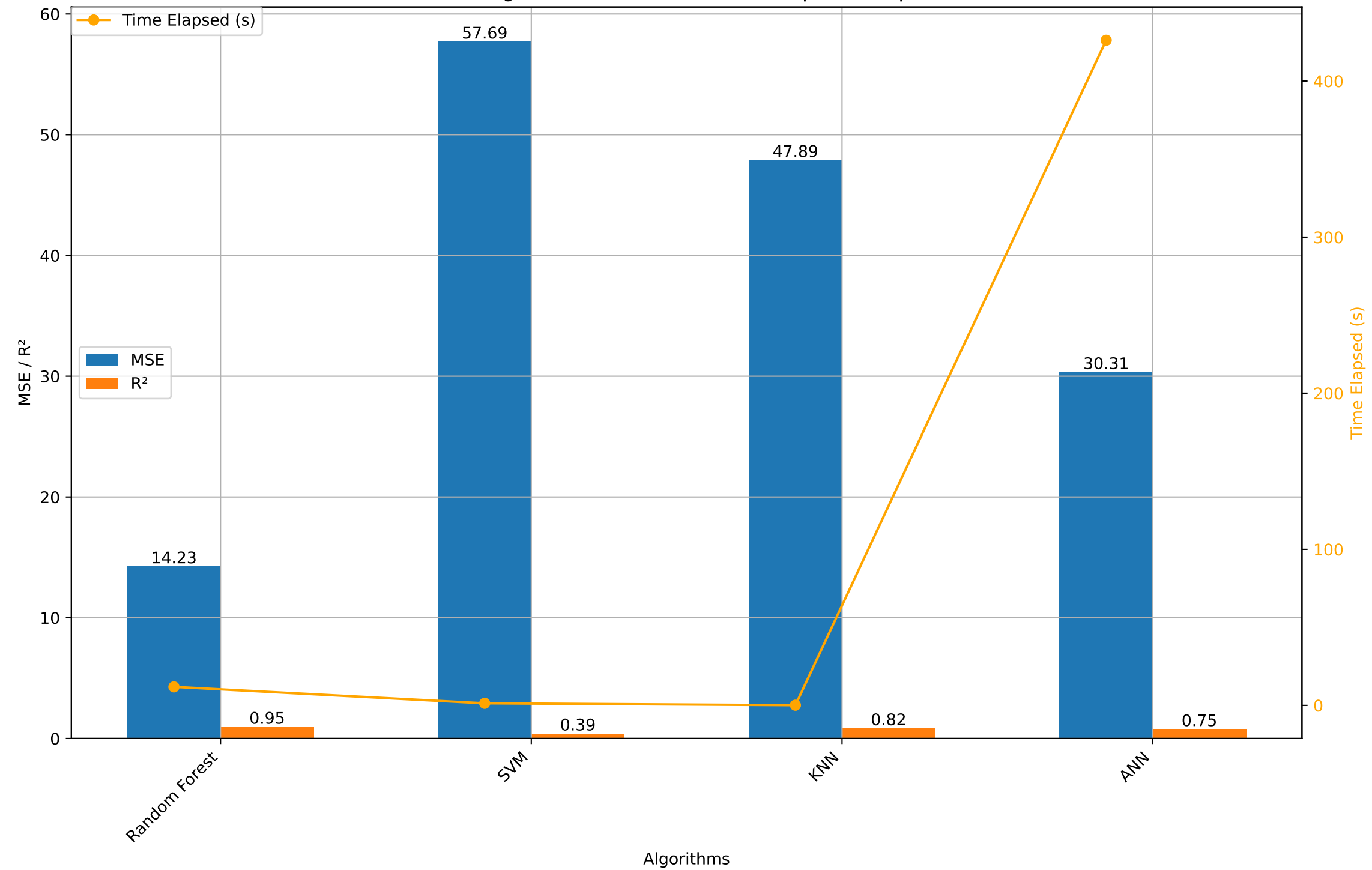


Bayesian Optimization TPE - MSE, R<sup>2</sup> and Time Elapsed Comparison

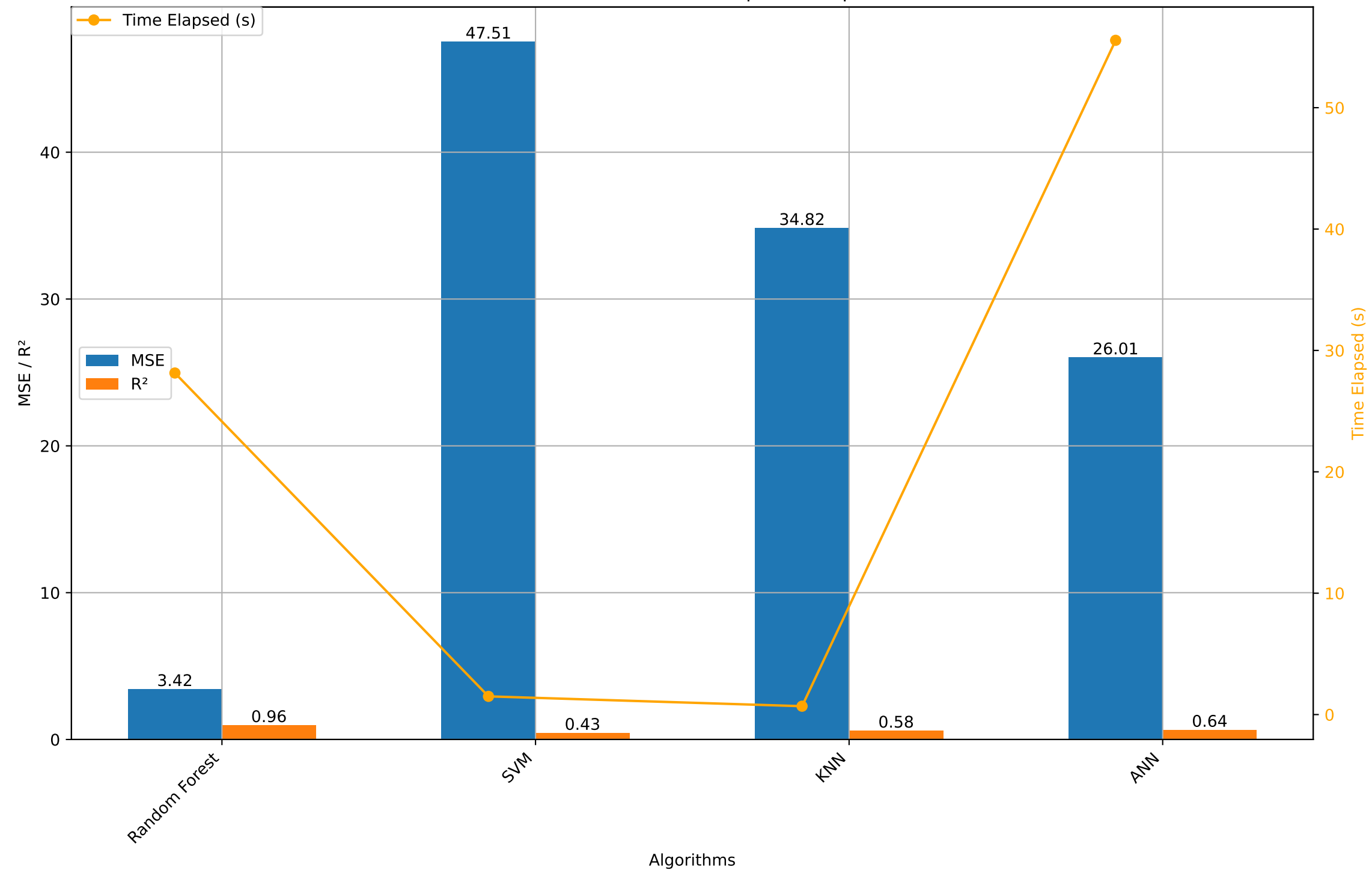


Particle Swarm Optimization - MSE, R<sup>2</sup> and Time Elapsed Comparison



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	11.834292784568596	Random Forest	0.8553826715552834	KNN	0.03
Grid Search	Random Forest	12.08381988769922	Random Forest	0.9764434706534132	KNN	0.07
Random Search	Random Forest	12.20671696334918	Random Forest	0.9809664367720884	KNN	0.18
Hyperband	Random Forest	10.472173561831776	Random Forest	0.9801412908833884	KNN	0.99
Bayesian Optimization	Random Forest	14.243396027813262	Random Forest	0.9075307116105374	KNN	2.12
Sequential Model-Based Optimization (skopt)	Random Forest	11.671639420884889	Random Forest	0.9820828241589012	KNN	1.11
Bayesian Optimization TPE	Random Forest	12.477309379153018	Random Forest	0.963671579276723	KNN	0.84
Particle Swarm Optimization	Random Forest	13.552166574179218	Random Forest	0.951000058513322	KNN	0.77
Genetic Algorithm	Random Forest	14.231840141731926	Random Forest	0.9460284123781943	KNN	0.12
TPOT	Random Forest	3.415120044852026	Random Forest	0.9592372340258496	KNN	0.69

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	11.671639420884889	Random Forest	0.9820828241589012	KNN	1.11