Comparisons Between different Algorithm and their Best Model %

1. **Multiple Linear Regression**

   R2Score = **0.935868097**

2. **Support Vector Machine**

Support Vector Machine			
Kernel	degree	r2 Score	Comments
poly	1	-0.0572305	
poly	0	-0.0508901	
linear		0.8950779	
rbf		-0.0573173	
sigmoid		-0.057499197	
precomputed			Cannot be Calculated asSVR requires a square kernel matrix as input, but your X_train is a 35x5 matrix (35 samples with 5 features).

3. **Decision Tree**

Decision Tree				
criterion	splitter	max_depth	r2 Score	Comments
squared_error	best		0.925401938	
squared_error	random		0.892244364	
friedman_mse	best		0.904269884	
friedman_mse	random		0.422935473	
absolute_error	best		0.949840653	Best Model in Decision Tree
absolute_error	random	5	0.7408381/0.7569438	Using Maxdepth=5 , r2 score improved by 1%
poisson	best	5	0.9318880/0.9111390	Using Maxdepth=5 , r2 score decreased by 2%
poisson	random		0.672222406	

4. Random Forest

Random Forest				
n_estimators	criterion	max_features	r2 Score	Comments
default=100	squared_error	sqrt	0.75915044	
default=100	squared_error	log2	0.75915045	
default=100	absolute_error	sqrt	0.785748335	
default=100	absolute_error	log2	0.785748335	
default=100	friedman_mse	sqrt	0.760859221	
default=100	friedman_mse	log2	0.760859221	
default=100	poisson	sqrt	0.7717642	
default=100	poisson	log2	0.771764206	
default=100			0.946004355	Best Model in Random Forest