

# Method Assignment

Algorithms	
A1	Stochastic Gradient Descent
A2	Gradient Descent with Probabilistic Assumptions
A3	Alternating Least Squares
Regularizations	
R1	Penalty of Magnitudes
R2	Bias and Intercepts
R3	Temporal Dynamics
Post-processing	
P2	KNN
P3	kernel ridge regression

Pairings	Algorithm	Regularization	Post processing
1	A1		P2
2	A1		P3
3	A1	R3	P2
4	A1	R3	P3
5	A1	R1+R2	P2
6	A1	R1+R2	P3
7	A2		P2
8	A2		P3
9	A3		P2
10	A3		P3
11	A3	R1+R2	P2
12	A3	R1+R2	P3
13	A3	R3	P2
14	A3	R3	P3

Group	Pairing Combination	Goal
Group 1	1 + 3 + 5	effect of regularizations given (A1+P2)
Group 2	9 + 11 + 13	effect of regularizations given (A3+P2)
Group 3	2 + 8	A1 vs A2 given P3
Group 4	3 + 4	P2 vs P3 given (A1+R3)
Group 5	3 + 13	A1 vs A3 given (R3+P2)
Group 6	13 + 14	P2 vs P3 given A3+R3
Group 7	7 + 8	P2 vs P3 given A2
Group 8	8 + 10	A2 vs A3 given P3
Group 9	11 + 12	P2 vs P3 given A3+(R1+R2)
Group 10	1 + 7	A1 vs A2 given P2