GradingRFE.xlsx 30.05.2010

Introduction to Recursive Filtering and Estimation

Results Programming Exercise 1 (Kalman Filtering)

Nummer	total %	Mistakes / Improvements
183424		
		incorrect modeling of process noise (no process noise in this exercise) (-15%); incorrect measurement update (gain set to 0
00-000-000		OR gain set to previous values OR use of previous measurement) (-15%);
01-910-140	95	prior update of covariance matrix without second order term (-5%);
02-924-132		
		incorrect modeling of process noise (no process noise in this exercise) (-15%); incorrect measurement update (gain set to 0
03-908-035	70	OR gain set to previous values OR use of previous measurement) (-15%);
03-908-571		
03-909-892	100	
03-918-604		
		incorrect initialization significantly decreases performance (-10%); incorrect modeling of process noise (no process noise in
04-910-501	75	this exercise) (-15%);
04-915-559		
04 024 224	400	variance initialization incorrect (minor effect) (-0%); measurement update should be improved (adapt dimensions of H, z,
04-921-334		R), but result ok (-0%);
05-057-542	100	
05-906-755		measurement update should be improved (adapt dimensions of H, z, R), but result ok (-0%);
05-906-896		Saturation on wheel radii decreases performance (inconsistency with error covariance) (-5%)
05-908-868	100	
05 000 220	05	iscorrect massurement undate (gain set to 0.0P gain set to provious values OP use of provious massurement) (15%).
05-909-239		incorrect measurement update (gain set to 0 OR gain set to previous values OR use of previous measurement) (-15%); incorrect modeling of process noise (no process noise in this exercise) (-15%); incorrect measurement update (gain set to 0
05 010 047		OR gain set to previous values OR use of previous measurement) (-15%);
05-910-047	/0	on gain set to previous values on use of previous fileasurefilefit) (-13%),
05-910-310	QΕ	averaging of 2 inputs (why?) (-0%); incorrect modeling of process noise (no process noise in this exercise) (-15%);
05-910-510		Initialization of variances incorrect (minor effect) (-0%)
03-910-339	100	incorrect modeling of process noise (no process noise in this exercise) (-15%); measurement update should be improved
05-910-856	95	(adapt dimensions of H, z, R), but result ok (-0%);
03-310-830	85	ladage difficultions of 1, 2, 11, but result on (0,0),
		wheel radii not modeled as estimator states (-15%); incorrect modeling of process noise (no process noise in this exercise) (-
05-912-522	70	15%); measurement update should be improved (adapt dimensions of H, z, R), but result ok (-0%);
03 312 322	,,,	incorrect modeling of process noise (no process noise in this exercise) (-15%); incorrect measurement update (gain set to 0
05-913-587	70	OR gain set to previous values OR use of previous measurement) (-15%);
05-914-528		measurement update should be improved (adapt dimensions of H, z, R), but result ok (-0%);
		wheel radii variance not initialized correctly (minor effect) (-0%); process noise (with explanation, minor) (-0%);
05-914-734	100	measurement update should be improved (adapt dimensions of H, z, R), but result ok (-0%);
05-915-152	85	averaging of 2 inputs (why?) (-0%); incorrect modeling of process noise (no process noise in this exercise) (-15%);
		wheel radii variance not initialized correctly (minor effect) (-0%); process noise (with explanation, minor) (-0%);
05-915-350	100	measurement update should be improved (adapt dimensions of H, z, R), but result ok (-0%);
05-915-566	85	incorrect measurement update (gain set to 0 OR gain set to previous values OR use of previous measurement) (-15%);
05-915-954	95	Saturation on wheel radii decreases performance (inconsistency with error covariance) (-5%)
05-919-352		
		incorrect modeling of process noise (no process noise in this exercise) (-15%); measurement update should be improved
05-919-766	85	(adapt dimensions of H, z, R), but result ok (-0%);
		wheel radii not modeled as estimator states (-15%); incorrect modeling of process noise (no process noise in this exercise) (-
05-919-816	70	15%); measurement update should be improved (adapt dimensions of H, z, R), but result ok (-0%);
		incorrect modeling of process noise (no process noise in this exercise) (-15%); measurement update should be improved
05-919-840	85	(adapt dimensions of H, z, R), but result ok (-0%);
		incorrect modeling of process noise (no process noise in this exercise) (-15%); measurement update should be improved
05-925-680	85	(adapt dimensions of H, z, R), but result ok (-0%);
05-929-849	_	
06-906-440	95	prior update of covariance matrix without second order term (-5%);
06-906-556	20.0	
06-907-380	-	wheel radii not initialized to mean (minor effect) (-0%)
06-907-943	100	
06-907-976	100	
06-908-230	95	prior update of covariance matrix without second order term (-5%);
06 000 37 :		
06-908-354	_	averaging of 2 inputs (why?) (-0%); incorrect modeling of process noise (no process noise in this exercise) (-15%);
06-908-859	100	
06-909-501	_	measurement update should be improved (adapt dimensions of H, z, R), but result ok (-0%);
06-909-527	100	wheel and it and initialized decreased for in a settle ab 1 0000
06-909-915	100	wheel radii not initialized to mean (minor effect) (-0%)

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		Initialization of variances incorrect (minor effect) (-0%); incorrect modeling of process noise (no process noise in this
06-909-956	85	exercise) (-15%); measurement update should be improved (adapt dimensions of H, z, R), but result ok (-0%);
06-910-178	100	excrease (1976), measurement aparate should be improved (adapt aimensions of 11, 2, 14), but result on (1976),
00 310 170	100	
06-911-093	85	incorrect measurement update (gain set to 0 OR gain set to previous values OR use of previous measurement) (-15%);
06-911-440	100	7. 7
		wheel radii not modeled as estimator states (-15%); incorrect modeling of process noise (no process noise in this exercise) (
06-912-273	70	15%); measurement update should be improved (adapt dimensions of H, z, R), but result ok (-0%);
06-913-198	100	Variance initialization not correct (minor effect) (-0%), KF Step 2 before Step 1 (-0%)
06-914-659		
06-914-998	100	
06-915-029	100	measurement update should be improved (adapt dimensions of H, z, R), but result ok (-0%);
06-915-490	100	Variance initialization not correct (minor effect) (-0%), KF Step 2 before Step 1 (-0%)
06-916-001	100	
06-916-936	95	prior update of covariance matrix without second order term (-5%);
06-916-985	100	measurement update should be improved (adapt dimensions of H, z, R), but result ok (-0%);
		measurement update should be improved (adapt dimensions of H, z, R), but result ok (-0%); process noise set to state
06-917-397	100	variance (minor effect) (-0%)
06-918-254	100	
06-919-765	100	wheel radii not initialized to mean (minor effect) (-0%)
06-920-599		Wrong submission.
06-920-755	100	measurement update should be improved (adapt dimensions of H, z, R), but result ok (-0%);
06-926-000	100	Variance initialization not correct (minor effect) (-0%), KF Step 2 before Step 1 (-0%)
08-906-307	100	
08-932-626	100	
08-938-714		
09-900-069		
09-901-521	100	
09-902-453		
09-907-403	60	wheel radii not modeled as estimator states (-15%); incorrect initialization significantly decreases performance (-10%); incorrect measurement update (gain set to 0 OR gain set to previous values OR use of previous measurement) (-15%);
09-907-411	60	wheel radii not modeled as estimator states (-15%); incorrect initialization significantly decreases performance (-10%); incorrect measurement update (gain set to 0 OR gain set to previous values OR use of previous measurement) (-15%);
	1	wheel radii not modeled as estimator states (-15%); incorrect measurement update (gain set to 0 OR gain set to previous
09-907-502	70	values OR use of previous measurement) (-15%);
		1 1 1
		wheel radii not modeled as estimator states (-15%); incorrect initialization significantly decreases performance (-10%);
09-908-302	60	incorrect measurement update (gain set to 0 OR gain set to previous values OR use of previous measurement) (-15%);
		wheel radii not modeled as estimator states (-15%); incorrect modeling of process noise (no process noise in this exercise) (-
		15%); incorrect measurement update (gain set to 0 OR gain set to previous values OR use of previous measurement) (-
09-909-052	55	15%);
		wheel radii not modeled as estimator states (-15%); incorrect modeling of process noise (no process noise in this exercise) (-
09-924-739	70	15%);
09-931-676	100	Initialization of variances incorrect (minor effect) (-0%)
]		wheel radii not modeled as estimator states (-15%); incorrect modeling of process noise (no process noise in this exercise) (-
		15%); incorrect measurement update (gain set to 0 OR gain set to previous values OR use of previous measurement) (-
09-935-123	55	15%);
		wheel radii not modeled as estimator states (-15%); incorrect modeling of process noise (no process noise in this exercise) (-
09-935-156	70	15%);
09-935-164		
		wheel radii not modeled as estimator states (-15%); incorrect modeling of process noise (no process noise in this exercise) (
		15%); incorrect measurement update (gain set to 0 OR gain set to previous values OR use of previous measurement) (-
09-935-362	55	15%);
		wheel radii not modeled as estimator states (-15%); incorrect modeling of process noise (no process noise in this exercise) (
		15%); incorrect measurement update (gain set to 0 OR gain set to previous values OR use of previous measurement) (-
09-935-958	55	15%);
09-936-451		
80-911-258		
count	69	
mean	86.67	
std	18.34	

Notes:

If you have questions regarding the grading of your programming exercise, please make an appointment with Sebastian (strimpe@ethz.ch). The results will be combined at the end of the class to a final grade.