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Test-setVariance: unreliable estimate of future performanceCheap
Leave- one-outExpensive. Has some weird behaviorDoesn't waste data















Which kind of Cross Validation?					
	Downside	Upside			
Test-set	Variance: unreliable estimate of future performance	Cheap			
Leave- one-out	Expensive. Has some weird behavior	Doesn't waste data			
10-fold	Wastes 10% of the data. 10 times more expensive than test set	Only wastes 10%. Only 10 times more expensive instead of R times.			
3-fold	Wastier than 10-fold. Expensivier than test set	Slightly better than test- set			
R-fold	Identical to Leave-one-out				
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	Downside	Upside		
Test-set	Variance: unreliable estimate of future performance	Cheap		
	Expensive	But note: One of		
		Andrew's joys in life is		
one-out	Has some weird behavio	algorithmic tricks for		
10-fold	Wastes 10% of the data	making these cheap		
	10 times more expensive	10 times more expensive		
	than testset	instead of R times.		
3-fold	Wastier than 10-fold.	Slightly better than test-		
	Expensivier than testset	set		
R-fold	Identical to Leave-one-out	·		

 CV-based Model Selection We're trying to decide which algorithm to use. We train each machine and make a table 								
i	<i>f</i> _{<i>i</i>}	TRAINERR	10-FOLD-CV-ERR	Choice				
1	<i>f</i> ₁							
2	<i>f</i> ₂							
3	<i>f</i> ₃			\checkmark				
4	<i>f</i> ₄							
5	<i>f</i> ₅							
6	<i>f</i> ₆	1						
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