etails													
Ratings were rounded					which errors are m	uch higher than ot	hers who did the a	ssignment					
ecause of time constr	aints, only 20% o	of the test data of	Movielens1M was	s used for predictions									
leighborhood uses the	same weight fur	nction as significa	nce, but with a thr	reshold as 0									
pearman rank coeffic	ent used for last	3 parts, and Pear	son coefficient for	first 2									
L100k Dataset													
	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	NMAE							
ser-User	0.248	0.239			0.249	0.244							
em-Item	0.269	0.271	0.264		0.258	0.264							
gnificance	0.364	0.372	0.379	0.374	0.377	0.373							
ariance	0.547	0.539	0.545	0.55	0.549	0.546							
eighborhood	0.404	0.417	0.414	0.412	0.411	0.412							
eighborhood (0.5)				Neighborhood (40)									
10	0.477			0.1	0.512								
20 30	0.421			0.2	0.495 0.412								
40	0.389			0.5	0.412								
40	0.3/3												
NMAE vs. K (for	Neighborhood	, threshold = 0	0.5)	NMAE vs Thre	eshold (for Nei	ghborhood, K=	40)	Signif	cance cro	ss validat	tion NMAE	/ fold	
0.48			- NMAE	0.525			- NMAE	0.38 -			_		
0.46			+	0.5									
0.44			+	0.5				0.375 -				<b>\</b>	
0.42 WeanAo				0.475									
0.4 We								0.37 -					
			-					0.07					
				0.45					/				
0.38								0.365 -					
	20	30	40	0.45									
0.38			40	0.425					_/				
0.38	20 Significano		40	0.425	0.2 0.3	0.4	0.5	0.365 -	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5
0.38			40	0.425	0.2 0.3	0.4	0.5	0.365 -	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5
0.38			40	0.425	0.2 0.3	0.4	0.5	0.365 -	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5
0.38			40	0.425	0.2 0.3	0.4	0.5	0.365 -	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5
0.38 0.36 10	Significand	ce		0.425			0.5	0.365 -	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5
0.38 0.36 10	Significand	Fold 2	Fold 3	0.425 0.4 0.1	Fold 5	NMAE	0.5	0.365 -	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5
0.38 0.36 10	Significand	Fold 2	Fold 3 0.256	0.425 0.4 0.1	Fold 5 0.25	NMAE 0.25	0.5	0.365 -	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5
0.38 0.36 10	Significand  Fold 1  0.253 0.237	Fold 2  0.247 0.219	Fold 3 0.256 0.232	0.425 0.4 0.1 Fold 4 0.249 0.224	Fold 5 0.25 0.223	NMAE 0.25 0.228	0.5	0.365 -	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5
0.38 0.36 10  L1m Dataset  ser-User am-Item ignificance	Fold 1 0.253 0.237 0.618	Fold 2 0.247 0.219	Fold 3 0.256 0.232 0.627	0.425 0.4 0.1 Fold 4 0.249 0.224 0.629	Fold 5 0.25 0.223 0.632	NMAE 0.25 0.228 0.628	0.5	0.365 -	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5
0.38 0.36 10  L1m Dataset  ser-User em-Item gnificance ariance	Fold 1  0.253 0.237 0.618 0.6027	Fold 2  0.247  0.219  0.631  0.617	Fold 3 0.256 0.232 0.627 0.612	0.425 0.4 0.1 Fold 4 0.249 0.224 0.629 0.609	Fold 5 0.25 0.223 0.632 0.616	NMAE 0.25 0.228 0.628 0.611	0.5	0.365 -	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5
0.38 0.36 10  L1m Dataset  ser-User em-Item gnificance ariance	Fold 1 0.253 0.237 0.618	Fold 2 0.247 0.219	Fold 3 0.256 0.232 0.627 0.612	0.425 0.4 0.1 Fold 4 0.249 0.224 0.629 0.609	Fold 5 0.25 0.223 0.632	NMAE 0.25 0.228 0.628	0.5	0.365 -	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5
0.38 0.36 10  L1m Dataset  ser-User em-Item ignificance ariance eighborhood	Fold 1  0.253 0.237 0.618 0.6027 0.534	Fold 2  0.247  0.219  0.631  0.617	Fold 3 0.256 0.232 0.627 0.612	0.425 0.4 0.1 Fold 4 0.249 0.224 0.629 0.609	Fold 5 0.25 0.223 0.632 0.616 0.554	NMAE 0.25 0.228 0.628 0.611	0.5	0.365 -	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5
0.38 0.36 10  L1m Dataset  ser-User em-Item ignificance ariance eighborhood	Fold 1  0.253 0.237 0.618 0.6027 0.534	Fold 2  0.247  0.219  0.631  0.617	Fold 3 0.256 0.232 0.627 0.612	0.425 0.4 0.11 Fold 4 0.249 0.224 0.629 0.609 0.545	Fold 5 0.25 0.223 0.632 0.616 0.554	NMAE 0.25 0.228 0.628 0.611	0.5	0.365 -	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5
0.38 0.36 10  IL1m Dataset  ser-User em-Item ignificance ariance eighborhood eighborhood (0.5)	Fold 1  0.253 0.237 0.618 0.6027 0.534	Fold 2  0.247  0.219  0.631  0.617	Fold 3 0.256 0.232 0.627 0.612	0.425 0.4 0.1 Fold 4 0.249 0.224 0.629 0.609 0.545 Neighborhood (40)	Fold 5 0.25 0.223 0.632 0.616 0.554	NMAE 0.25 0.228 0.628 0.611	0.5	0.365 -	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5
L1m Dataset  Ser-User em-Item gnificance ariance eighborhood eighborhood (0.5)  10  20 30	Fold 1  0.253 0.237 0.618 0.6027 0.534  NMAE  0.68 0.672 0.661	Fold 2 0.247 0.219 0.631	Fold 3 0.256 0.232 0.627 0.612	0.425 0.4 0.1 Fold 4 0.249 0.629 0.609 0.545 Neighborhood (40) 0.1	Fold 5  0.25  0.233  0.632  0.616  0.554  NMAE  0.617	NMAE 0.25 0.228 0.628 0.611	0.5	0.365 -	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5
0.38 0.36 10  iL1m Dataset  ser-User em-Item ignificance ariance eighborhood eighborhood (0.5) 10 20	Fold 1  0.253 0.237 0.618 0.6027 0.534  NMAE  0.68 0.672	Fold 2 0.247 0.219 0.631	Fold 3 0.256 0.232 0.627 0.612	0.425 0.4 0.1 Fold 4 0.249 0.629 0.609 0.545 Neighborhood (40) 0.1 0.2	Fold 5  0.25  0.223  0.632  0.616  0.554  NMAE  0.617  0.589	NMAE 0.25 0.228 0.628 0.611	0.5	0.365 -	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5
0.38 0.36 10  IL1m Dataset  ser-User em-Item ignificance ariance eighborhood eighborhood 0.5) 10 20 30	Fold 1  0.253 0.237 0.618 0.6027 0.534  NMAE  0.68 0.672 0.661	Fold 2 0.247 0.219 0.631	Fold 3 0.256 0.232 0.627 0.612	0.425 0.4 0.1 Fold 4 0.249 0.629 0.609 0.545 Neighborhood (40) 0.1 0.2	Fold 5  0.25  0.223  0.632  0.616  0.554  NMAE  0.617  0.589	NMAE 0.25 0.228 0.628 0.611	0.5	0.365 -	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5
0.38 0.36 10  IL1m Dataset  ser-User em-Item ignificance ariance eighborhood eighborhood 20 20 30 40	Fold 1  0.253 0.237 0.618 0.6027 0.534  NMAE  0.68 0.672 0.661 0.628	Fold 2 0.247 0.219 0.631 0.617 0.548	Fold 3 0.256 0.232 0.627 0.612 0.542	0.425 0.4 0.1 Fold 4 0.249 0.224 0.629 0.545 Neighborhood (40) 0.1 0.2 0.5	Fold 5  0.25  0.23  0.632  0.616  0.554  NMAE  0.617  0.589  0.545	NMAE 0.25 0.228 0.628 0.611		0.365 -			Fold 3		Fold 5
L1m Dataset  L1m Dataset  ser-User em-Item gnificance ariance eighborhood  20 20 30 40	Fold 1  0.253 0.237 0.618 0.6027 0.534  NMAE  0.68 0.672 0.661 0.628	Fold 2 0.247 0.219 0.631 0.617 0.548	Fold 3 0.256 0.232 0.627 0.612 0.542	0.425 0.4 0.1 Fold 4 0.249 0.224 0.629 0.545 Neighborhood (40) 0.1 0.2 0.5	Fold 5  0.25  0.23  0.632  0.616  0.554  NMAE  0.617  0.589  0.545	NMAE  0.25  0.28  0.628  0.611  0.545		0.365 -					Fold 5
0.38 0.36 10  IL1m Dataset  ser-User em-Item ignificance ariance eighborhood 20 30 40  NMAE vs. K ( for	Fold 1  0.253 0.237 0.618 0.6027 0.534  NMAE  0.68 0.672 0.661 0.628	Fold 2 0.247 0.219 0.631 0.617 0.548	Fold 3  0.256 0.232 0.627 0.612 0.542	0.425 0.4 0.1 Fold 4 0.249 0.224 0.629 0.545 Neighborhood (40) 0.1 0.2 0.5	Fold 5  0.25  0.23  0.632  0.616  0.554  NMAE  0.617  0.589  0.545	NMAE  0.25  0.28  0.628  0.611  0.545	:40)	0.365 - 0.36 - Signi					Fold 5
L1m Dataset  ser-User em-Item gnificance ariance eighborhood eighborhood 0.5) 10 20 30 40  NMAE vs. K ( for	Fold 1  0.253 0.237 0.618 0.6027 0.534  NMAE  0.68 0.672 0.661 0.628	Fold 2 0.247 0.219 0.631 0.617 0.548	Fold 3  0.256 0.232 0.627 0.612 0.542	0.425 0.4 0.1 Fold 4 0.249 0.224 0.629 0.545 Neighborhood (40) 0.1 0.2 0.5	Fold 5  0.25  0.23  0.632  0.616  0.554  NMAE  0.617  0.589  0.545	NMAE  0.25  0.28  0.628  0.611  0.545	:40)	0.365 - 0.36 - 0					Fold 5
0.38 0.36 10  IL1m Dataset  ser-User em-Item ignificance ariance eighborhood 20 30 40  NMAE vs. K ( for	Fold 1  0.253 0.237 0.618 0.6027 0.534  NMAE  0.68 0.672 0.661 0.628	Fold 2 0.247 0.219 0.631 0.617 0.548	Fold 3  0.256 0.232 0.627 0.612 0.542	0.425 0.4 0.1 0.249 0.224 0.629 0.609 0.545 Neighborhood (40) 0.1 0.2 0.5	Fold 5  0.25  0.23  0.632  0.616  0.554  NMAE  0.617  0.589  0.545	NMAE  0.25  0.28  0.628  0.611  0.545	:40)	0.365 - 0.36 - Signi					Fold 5
0.38 0.36 10  IL1m Dataset  Iser-User em-Item ignificance ariance leighborhood  20 30 40  NMAE vs. K ( for	Fold 1  0.253 0.237 0.618 0.6027 0.534  NMAE  0.68 0.672 0.661 0.628	Fold 2 0.247 0.219 0.631 0.617 0.548	Fold 3  0.256 0.232 0.627 0.612 0.542	0.425 0.4 0.1 0.249 0.224 0.629 0.609 0.545 Neighborhood (40) 0.1 0.2 0.5	Fold 5  0.25  0.23  0.632  0.616  0.554  NMAE  0.617  0.589  0.545	NMAE  0.25  0.28  0.628  0.611  0.545	:40)	0.365 - 0.36 - 0					Fold 5
0.38 0.36 10  IL1m Dataset  ser-User em-Item ignificance ariance eighborhood 20 30 40  NMAE vs. K ( for	Fold 1  0.253 0.237 0.618 0.6027 0.534  NMAE  0.68 0.672 0.661 0.628	Fold 2 0.247 0.219 0.631 0.617 0.548	Fold 3  0.256 0.232 0.627 0.612 0.542	0.425 0.4 0.1 0.249 0.224 0.629 0.609 0.545 Neighborhood (40) 0.1 0.2 0.5	Fold 5  0.25  0.23  0.632  0.616  0.554  NMAE  0.617  0.589  0.545	NMAE  0.25  0.28  0.628  0.611  0.545	:40)	0.365 - 0.36 - 0.36 - 0.375					Fold 5
L1m Dataset  Ser-User em-Item ggnificance eighborhood (0.5)  10  20  30  40  NMAE vs. K ( for 0.68  0.66	Fold 1  0.253 0.237 0.618 0.6027 0.534  NMAE  0.68 0.672 0.661 0.628	Fold 2 0.247 0.219 0.631 0.617 0.548	Fold 3  0.256 0.232 0.627 0.612 0.542	0.425 0.4 0.1 0.249 0.224 0.629 0.609 0.545 Neighborhood (40) 0.1 0.2 0.5	Fold 5  0.25  0.23  0.632  0.616  0.554  NMAE  0.617  0.589  0.545	NMAE  0.25  0.28  0.628  0.611  0.545	:40)	0.365 - 0.36 - 0.36 - 0.375					Fold 5
L1m Dataset  ser-User em-Item ignificance ariance eighborhood (0.5) 10 20 30 40  NMAE vs. K ( for	Fold 1  0.253 0.237 0.618 0.6027 0.534  NMAE  0.68 0.672 0.661 0.628	Fold 2  0.247 0.219 0.631 0.617 0.548	Fold 3  0.256 0.232 0.627 0.612 0.542	0.425 0.4 0.1 0.249 0.224 0.629 0.609 0.545 Neighborhood (40) 0.1 0.2 0.5	Fold 5  0.25  0.23  0.632  0.616  0.554  NMAE  0.617  0.589  0.545	NMAE  0.25  0.28  0.628  0.611  0.545	:40)	0.365 - 0.36 - 0.36 - 0.37					Fold 5
User William Dataset  L1m Datas	Fold 1  0.253 0.237 0.618 0.6027 0.534  NMAE  0.68 0.672 0.661 0.628  Neighborhood	Fold 2  0.247 0.219 0.631 0.617 0.548	Fold 3  0.256 0.232 0.627 0.612 0.542	0.425 0.4 0.1 Fold 4 0.249 0.224 0.629 0.609 0.545 Neighborhood (40) 0.1 0.2 0.5 NMAE vs Thr 0.62 0.62 0.63 0.54	Fold 5  0.25  0.223  0.632  0.616  0.554  NMAE  0.617  0.589  0.545	NMAE  0.25 0.228 0.628 0.611 0.545	- NMAE	0.365 - 0.36 - 0.36 - 0.37	ficance cr	oss valida	ation NMAE	E / fold	
0.38 0.36 10  L1m Dataset  ser-User m-Item gnifficance triance sighborhood sighborhood 0.5) 10 20 30 40  NMAE vs. K ( for l 0.68 0.66	Fold 1  0.253 0.237 0.618 0.6027 0.534  NMAE  0.68 0.672 0.661 0.628	Fold 2  0.247 0.219 0.631 0.617 0.548	Fold 3  0.256 0.232 0.627 0.612 0.542	0.425 0.4 0.1 Fold 4 0.249 0.224 0.629 0.609 0.545 Neighborhood (40) 0.1 0.2 0.5 NMAE vs Thr 0.62 0.62 0.63 0.54	Fold 5  0.25  0.23  0.632  0.616  0.554  NMAE  0.617  0.589  0.545	NMAE  0.25  0.28  0.628  0.611  0.545	:40)	0.365 - 0.36 - 0		oss valida			