

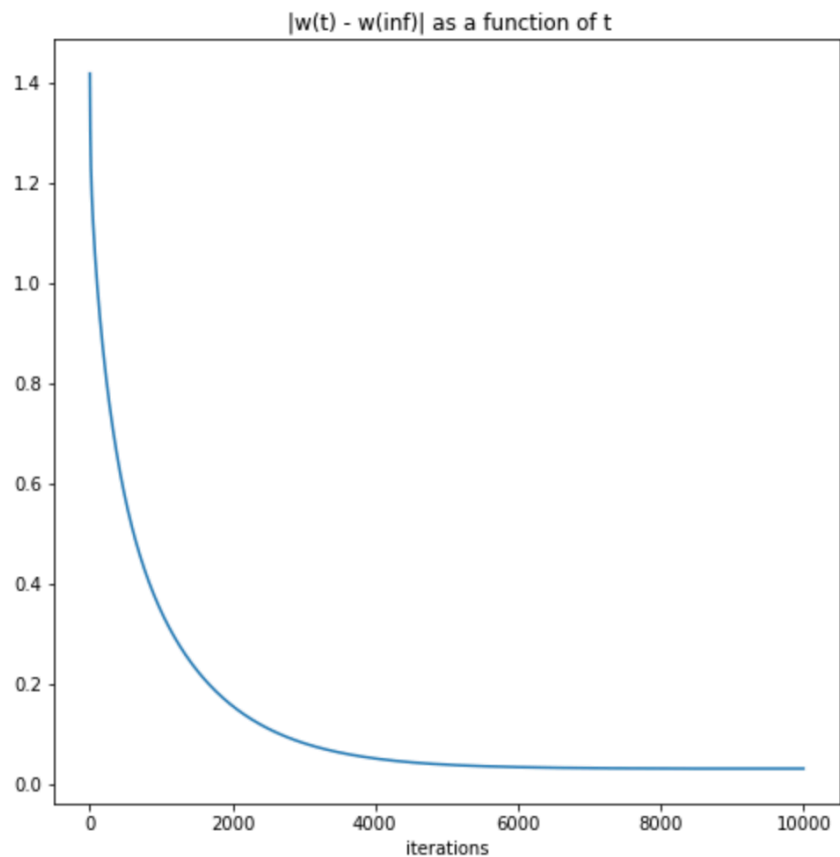
ANS 1 a)

Top 25 teams for t=10,100,1000,10000 iterations.

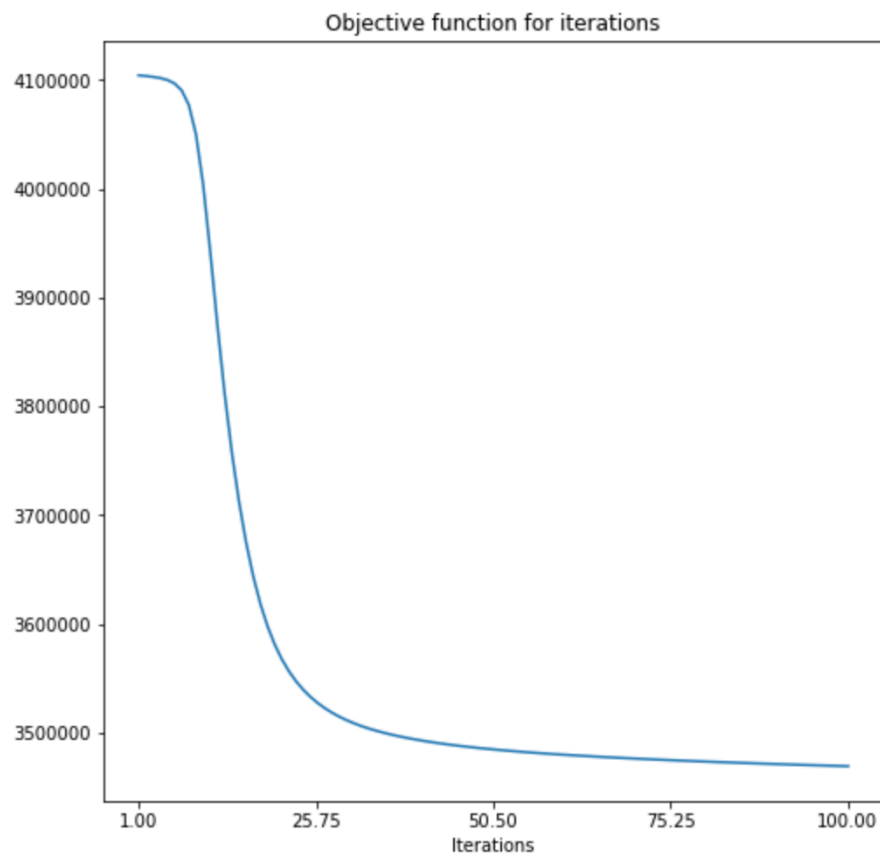
	Top 25 Teams for t=10			Top 25 Teams for t=100			Top 25 Teams for t=1000			Top 25 Teams for t=10000	
RANK	team	w_final		team	w_final		team	w_final		team	w_final
1	0	MountUnion 0.016989		0	MountUnion 0.065391		0	Alabama 0.042149		0	Alabama 0.051005
2	1	MaryHardin-Baylor 0.012549		1	Alabama 0.022656		1	Georgia 0.034813		1	Georgia 0.042086
3	2	StFrancisIN 0.011672		2	Georgia 0.018986		2	MountUnion 0.034089		2	OhioState 0.033492
4	3	UW-Oshkosh 0.009883		3	UW-Oshkosh 0.017787		3	OhioState 0.027643		3	Clemson 0.032425
5	4	Morningside 0.009722		4	OhioState 0.014655		4	Clemson 0.026809		4	Oklahoma 0.031587
6	5	BrockportSt 0.009562		5	Clemson 0.014524		5	Oklahoma 0.026095		5	Wisconsin 0.031024
7	6	TAMU-Commerce 0.008442		6	Oklahoma 0.014012		6	Wisconsin 0.025605		6	CentralFlorida 0.028748
8	7	NorthDakotaSt 0.008420		7	Wisconsin 0.013568		7	CentralFlorida 0.023770		7	Auburn 0.026449
9	8	IndianaPA 0.008386		8	CentralFlorida 0.012878		8	Auburn 0.021864		8	PennState 0.023978
10	9	Alabama 0.008160		9	MaryHardin-Baylor 0.012744		9	PennState 0.019800		9	NotreDame 0.018011
11	10	JamesMadison 0.008038		10	TAMU-Commerce 0.012397		10	NotreDame 0.014891		10	TCU 0.017175
12	11	Georgia 0.007909		11	Auburn 0.011800		11	TCU 0.014202		11	MiamiFL 0.014346
13	12	DelawareValley 0.007667		12	StFrancisIN 0.011534		12	MiamiFL 0.011865		12	MichiganSt 0.014209
14	13	Wartburg 0.007536		13	PennState 0.010557		13	MichiganSt 0.011735		13	OklahomaSt 0.013607
15	14	CentralFlorida 0.007196		14	BrockportSt 0.009613		14	OklahomaSt 0.011253		14	Iowa 0.012885
16	15	Clemson 0.006751		15	DelawareValley 0.008079		15	Iowa 0.010640		15	Northwestern 0.012478
17	16	Reinhardt 0.006705		16	NotreDame 0.008071		16	Northwestern 0.010302		16	IowaSt 0.012344
18	17	StThomas 0.006594		17	NorthDakotaSt 0.007893		17	IowaSt 0.010216		17	LSU 0.011540
19	18	OhioState 0.006342		18	FrostburgSt 0.007848		18	LSU 0.009543		18	SouthernCal 0.011414
20	19	Wisconsin 0.006301		19	TCU 0.007714		19	NorthDakotaSt 0.009465		19	Washington 0.011167
21	20	Oklahoma 0.006237		20	MinnSt-Mankato 0.007504		20	SouthernCal 0.009449		20	NorthDakotaSt 0.010916
22	21	MinnSt-Mankato 0.006109		21	CaseWesternReserve 0.007120		21	Washington 0.009256		21	Stanford 0.010526
23	22	Assumption 0.005865		22	JohnCarroll 0.006813		22	UW-Oshkosh 0.009255		22	MississippiSt 0.010295
24	23	Springfield 0.005657		23	IndianaPA 0.006524		23	Stanford 0.008715		23	VirginiaTech 0.010039
25	24	Ashland 0.005540		24	Harding 0.006513		24	MississippiSt 0.008514		24	NorthCarolinaSt 0.009575

b)

Plot of the desired $|w(t) - w(\text{inf})|$ for iteration t



ANS 2 a)



2 b)

25 topics with their weights to words.

topic 1	topic 2	topic 3	topic 4	topic 5
('0.011', 'issue')	('0.010', 'man')	('0.021', 'score')	('0.019', 'art')	('0.029', 'percent')
('0.011', 'meeting')	('0.010', 'thing')	('0.021', 'game')	('0.012', 'artist')	('0.016', 'market')
('0.010', 'political')	('0.009', 'wear')	('0.020', 'second')	('0.011', 'collection')	('0.016', 'price')
('0.009', 'public')	('0.009', 'tell')	('0.018', 'hit')	('0.010', 'museum')	('0.015', 'rate')
('0.007', 'speak')	('0.009', 'woman')	('0.014', 'third')	('0.010', 'photograph')	('0.014', 'rise')
('0.007', 'president')	('0.008', 'ask')	('0.014', 'shot')	('0.009', 'design')	('0.012', 'stock')
('0.007', 'member')	('0.008', 'room')	('0.014', 'point')	('0.008', 'exhibition')	('0.010', 'fall')
('0.007', 'leader')	('0.007', 'little')	('0.013', 'play')	('0.007', 'image')	('0.009', 'report')
('0.007', 'official')	('0.007', 'sit')	('0.012', 'victory')	('0.007', 'painting')	('0.009', 'increase')
('0.007', 'statement')	('0.007', 'feel')	('0.011', 'minute')	('0.007', 'display')	('0.009', 'low')
topic 6	topic 7	topic 8	topic 9	topic 10
('0.051', 'school')	('0.015', 'happen')	('0.017', 'car')	('0.021', 'police')	('0.021', 'life')
('0.039', 'student')	('0.014', 'job')	('0.011', 'air')	('0.020', 'charge')	('0.015', 'book')
('0.031', 'father')	('0.014', 'thing')	('0.010', 'mile')	('0.014', 'case')	('0.012', 'write')
('0.027', 'mrs')	('0.013', 'bad')	('0.009', 'driver')	('0.012', 'investigation')	('0.011', 'man')
('0.025', 'graduate')	('0.012', 'problem')	('0.009', 'hour')	('0.012', 'officer')	('0.011', 'story')
('0.023', 'son')	('0.011', 'tell')	('0.009', 'water')	('0.011', 'man')	('0.009', 'family')
('0.021', 'daughter')	('0.011', 'keep')	('0.008', 'drive')	('0.011', 'lawyer')	('0.008', 'love')
('0.020', 'mother')	('0.011', 'ask')	('0.008', 'vehicle')	('0.011', 'official')	('0.007', 'woman')
('0.020', 'parent')	('0.010', 'feel')	('0.008', 'flight')	('0.011', 'arrest')	('0.007', 'friend')
('0.020', 'child')	('0.010', 'put')	('0.008', 'traffic')	('0.010', 'crime')	('0.007', 'character')
topic 11	topic 12	topic 13	topic 14	topic 15
('0.019', 'music')	('0.018', 'program')	('0.021', 'law')	('0.031', 'building')	('0.018', 'military')
('0.016', 'play')	('0.016', 'state')	('0.013', 'rule')	('0.019', 'city')	('0.015', 'war')
('0.013', 'film')	('0.014', 'plan')	('0.012', 'court')	('0.017', 'build')	('0.014', 'official')
('0.011', 'performance')	('0.014', 'money')	('0.011', 'case')	('0.015', 'house')	('0.013', 'government')
('0.011', 'audience')	('0.013', 'cost')	('0.010', 'require')	('0.014', 'space')	('0.012', 'force')
('0.010', 'movie')	('0.012', 'pay')	('0.009', 'legal')	('0.012', 'area')	('0.011', 'attack')
('0.009', 'production')	('0.012', 'budget')	('0.009', 'state')	('0.011', 'floor')	('0.009', 'leader')
('0.008', 'director')	('0.011', 'official')	('0.009', 'lawyer')	('0.011', 'project')	('0.009', 'american')
('0.008', 'theater')	('0.011', 'cut')	('0.009', 'issue')	('0.011', 'site')	('0.009', 'peace')
('0.008', 'dance')	('0.010', 'increase')	('0.009', 'decision')	('0.010', 'apartment')	('0.008', 'weapon')
topic 16	topic 17	topic 18	topic 19	topic 20
('0.018', 'live')	('0.041', 'team')	('0.019', 'sell')	('0.034', 'american')	('0.012', 'food')
('0.016', 'town')	('0.029', 'player')	('0.017', 'store')	('0.034', 'country')	('0.009', 'water')
('0.016', 'city')	('0.027', 'game')	('0.017', 'buy')	('0.028', 'states')	('0.008', 'serve')
('0.015', 'home')	('0.022', 'season')	('0.016', 'cost')	('0.019', 'world')	('0.008', 'restaurant')
('0.012', 'local')	('0.022', 'play')	('0.014', 'price')	('0.012', 'nation')	('0.008', 'dry')
('0.011', 'family')	('0.017', 'coach')	('0.013', 'offer')	('0.012', 'americans')	('0.007', 'fresh')
('0.011', 'community')	('0.011', 'league')	('0.013', 'sale')	('0.011', 'foreign')	('0.007', 'taste')
('0.011', 'group')	('0.010', 'baseball')	('0.012', 'customer')	('0.011', 'economic')	('0.007', 'add')
('0.010', 'resident')	('0.009', 'football')	('0.010', 'available')	('0.011', 'international')	('0.007', 'pound')
('0.010', 'child')	('0.008', 'sport')	('0.010', 'pay')	('0.010', 'government')	('0.007', 'small')
topic 21	topic 22	topic 23	topic 24	topic 25
('0.014', 'study')	('0.040', 'win')	('0.045', 'company')	('0.022', 'vote')	('0.022', 'editor')
('0.012', 'drug')	('0.018', 'race')	('0.023', 'executive')	('0.021', 'campaign')	('0.015', 'article')
('0.011', 'health')	('0.018', 'final')	('0.016', 'president')	('0.016', 'republican')	('0.010', 'write')
('0.011', 'doctor')	('0.016', 'second')	('0.015', 'business')	('0.015', 'candidate')	('0.009', 'question')
('0.009', 'medical')	('0.013', 'play')	('0.013', 'chief')	('0.015', 'election')	('0.008', 'page')
('0.009', 'research')	('0.013', 'finish')	('0.011', 'industry')	('0.014', 'political')	('0.007', 'information')
('0.009', 'patient')	('0.012', 'match')	('0.009', 'vice')	('0.013', 'party')	('0.007', 'answer')
('0.008', 'cause')	('0.011', 'round')	('0.009', 'sell')	('0.012', 'democratic')	('0.007', 'system')
('0.008', 'treatment')	('0.011', 'winner')	('0.009', 'chairman')	('0.011', 'leader')	('0.007', 'problem')
('0.008', 'report')	('0.010', 'victory')	('0.009', 'share')	('0.010', 'state')	('0.006', 'letter')