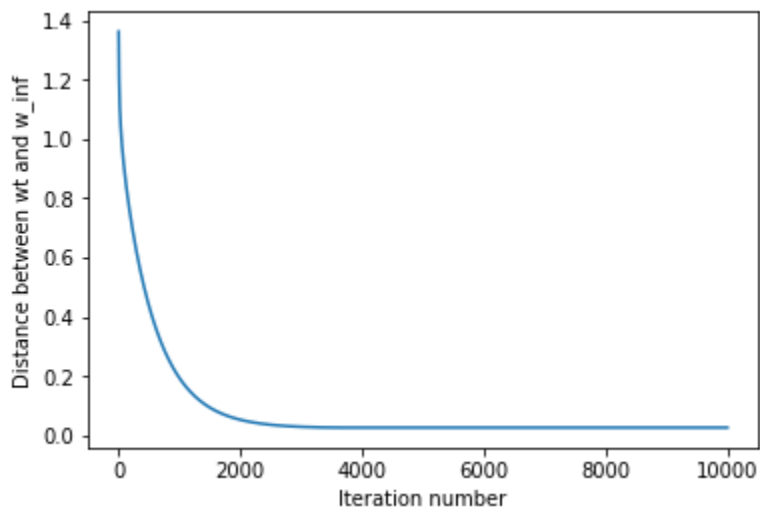# ML for Data Science: HW5

Abhay Pawar (UNI: asp2197)
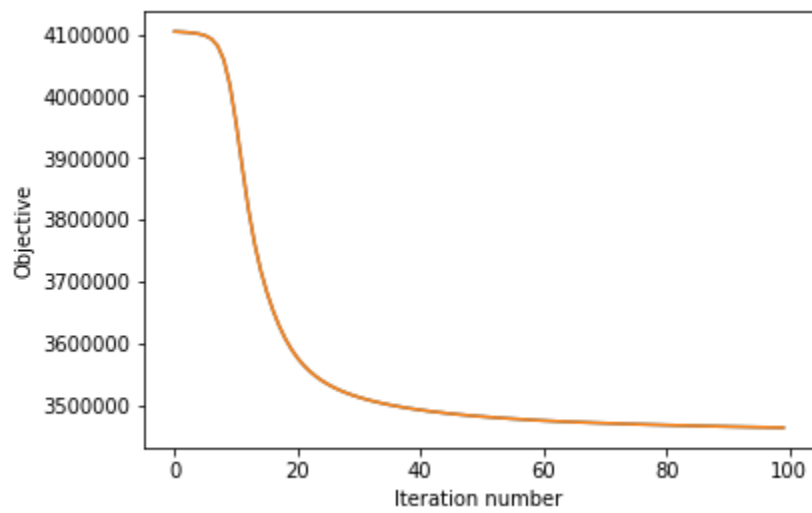
Problem 1.a

t=10		t=100		t=1000		t=10000	
w	**team**	**w**	**team**	**w**	**team**	**w**	**team**
0.0148	Mary Hardin-Baylor	0.0383	NW Missouri St	0.0607	Alabama	0.0673	Alabama
0.0132	NW Missouri St	0.0334	Alabama	0.0604	Clemson	0.0670	Clemson
0.0124	Alabama	0.0330	Clemson	0.0305	NW Missouri St	0.0208	Florida St
0.0110	Clemson	0.0309	Mary Hardin-Baylor	0.0188	Florida St	0.0199	Ohio State
0.0099	UW-Oshkosh	0.0168	UW-Oshkosh	0.0180	Ohio State	0.0176	Washington
0.0082	St Thomas	0.0122	UW-Whitewater	0.0159	Washington	0.0175	Virginia Tech
0.0082	UW-Whitewater	0.0104	Florida St	0.0158	Virginia Tech	0.0164	Michigan
0.0081	St Francis IN	0.0103	Grand Valley St	0.0148	Michigan	0.0163	NW Missouri St
0.0078	Mount Union	0.0102	John Carroll	0.0147	Pittsburgh	0.0162	Pittsburgh
0.0074	James Madison	0.0099	Ohio State	0.0144	Oklahoma	0.0159	Oklahoma
0.0070	Reinhardt	0.0094	Ferris St	0.0137	Penn State	0.0151	Penn State
0.0069	John Carroll	0.0093	St Thomas	0.0131	Wisconsin	0.0145	Wisconsin
0.0068	Shepherd	0.0089	Washington	0.0126	Louisville	0.0140	Louisville
0.0067	California PA	0.0088	Virginia Tech	0.0124	Miami FL	0.0138	Miami FL
0.0065	North Dakota St	0.0087	Mount Union	0.0116	Southern Cal	0.0128	Southern Cal
0.0064	Baker	0.0082	Michigan	0.0114	North Carolina	0.0126	North Carolina
0.0063	Alfred	0.0081	Pittsburgh	0.0113	Oklahoma St	0.0125	Oklahoma St
0.0062	Grand Valley St	0.0080	Oklahoma	0.0113	Florida	0.0125	Florida
0.0061	North Alabama	0.0080	Emporia St	0.0108	Tennessee	0.0120	Tennessee
0.0058	Harding	0.0076	Penn State	0.0108	Auburn	0.0120	Auburn
0.0056	Marian IN	0.0073	Wisconsin	0.0100	Georgia Tech	0.0111	Georgia Tech
0.0055	North Central	0.0070	Louisville	0.0095	LSU	0.0105	LSU
0.0055	Trinity CT	0.0069	Miami FL	0.0095	Western Michigan	0.0105	Western Michigan
0.0055	Wheaton	0.0065	North Carolina	0.0095	Stanford	0.0105	Stanford
0.0054	Morningside	0.0064	Southern Cal	0.0087	James Madison	0.0095	Texas A&M

b.

Problem 2.a

Topics 1 to 5:

wts	words	wts	words	wts	words	wts	words	wts	words
0.024	water	0.024	yesterday	0.024	child	0.024	percent	0.024	campaign
0.015	plant	0.015	contract	0.015	young	0.015	rate	0.015	political
0.014	mile	0.014	official	0.014	woman	0.014	price	0.014	election
0.010	inch	0.010	announce	0.010	family	0.010	market	0.010	vote
0.010	weather	0.010	job	0.010	old	0.010	rise	0.010	candidate
0.010	keep	0.010	spokesman	0.010	life	0.010	economy	0.010	party
0.009	small	0.009	employee	0.009	home	0.009	economic	0.009	republican
0.009	foot	0.009	union	0.009	man	0.009	increase	0.009	democratic
0.008	clean	0.008	news	0.008	age	0.008	fall	0.008	leader
0.008	place	0.008	president	0.008	parent	0.008	low	0.008	voter

Topics 6 to 10:

wts	words	wts	words	wts	words	wts	words	wts	words
0.024	american	0.024	black	0.024	art	0.024	life	0.024	drug
0.015	government	0.015	group	0.015	image	0.015	story	0.015	health
0.014	military	0.014	white	0.014	design	0.014	film	0.014	doctor
0.010	states	0.010	country	0.010	artist	0.010	character	0.010	cause
0.010	war	0.010	community	0.010	color	0.010	book	0.010	hospital
0.010	official	0.010	speak	0.010	fashion	0.010	write	0.010	medical
0.009	country	0.009	member	0.009	collection	0.009	love	0.009	patient
0.009	force	0.009	city	0.009	wear	0.009	movie	0.009	treatment
0.008	leader	0.008	religious	0.008	style	0.008	man	0.008	die
0.008	attack	0.008	church	0.008	display	0.008	friend	0.008	disease

Topics 10 to 15:

wts	words	wts	words	wts	words	wts	words	wts	words
0.024	music	0.024	building	0.024	money	0.024	law	0.024	food
0.015	play	0.015	city	0.015	pay	0.015	state	0.015	restaurant
0.014	performance	0.014	area	0.014	cost	0.014	court	0.014	serve
0.010	perform	0.010	house	0.010	program	0.010	rule	0.010	dinner
0.010	dance	0.010	build	0.010	cut	0.010	bill	0.010	taste
0.010	song	0.010	resident	0.010	budget	0.010	require	0.010	eat
0.009	audience	0.009	street	0.009	state	0.009	issue	0.009	red
0.009	stage	0.009	home	0.009	plan	0.009	case	0.009	table
0.008	sing	0.008	open	0.008	percent	0.008	decision	0.008	lunch
0.008	sound	0.008	town	0.008	tax	0.008	allow	0.008	add

Topics 15 to 20:

wts	words	wts	words	wts	words	wts	words	wts	words
0.024	official	0.024	company	0.024	police	0.024	editor	0.024	computer
0.015	public	0.015	business	0.015	charge	0.015	article	0.015	television
0.014	investigation	0.014	sell	0.014	man	0.014	write	0.014	network
0.010	report	0.010	sale	0.010	officer	0.010	book	0.010	company
0.010	statement	0.010	executive	0.010	arrest	0.010	publish	0.010	technology
0.010	member	0.010	share	0.010	crime	0.010	writer	0.010	service
0.009	charge	0.009	buy	0.009	case	0.009	american	0.009	program
0.009	question	0.009	market	0.009	trial	0.009	history	0.009	site
0.008	information	0.008	industry	0.008	lawyer	0.008	page	0.008	system
0.008	office	0.008	stock	0.008	prison	0.008	question	0.008	internet

Topics 20 to 25:

wts	words	wts	words	wts	words	wts	words	wts	words
0.024	thing	0.024	game	0.024	mrs	0.024	school	0.024	test
0.015	ask	0.015	play	0.015	father	0.015	student	0.015	study
0.014	feel	0.014	team	0.014	president	0.014	education	0.014	problem
0.010	tell	0.010	win	0.010	son	0.010	class	0.010	research
0.010	little	0.010	player	0.010	graduate	0.010	program	0.010	result
0.010	really	0.010	season	0.010	retire	0.010	teacher	0.010	expert
0.009	happen	0.009	second	0.009	daughter	0.009	college	0.009	system
0.009	lot	0.009	victory	0.009	vice	0.009	child	0.009	change
0.008	put	0.008	score	0.008	director	0.008	university	0.008	develop
0.008	keep	0.008	point	0.008	marry	0.008	public	0.008	number