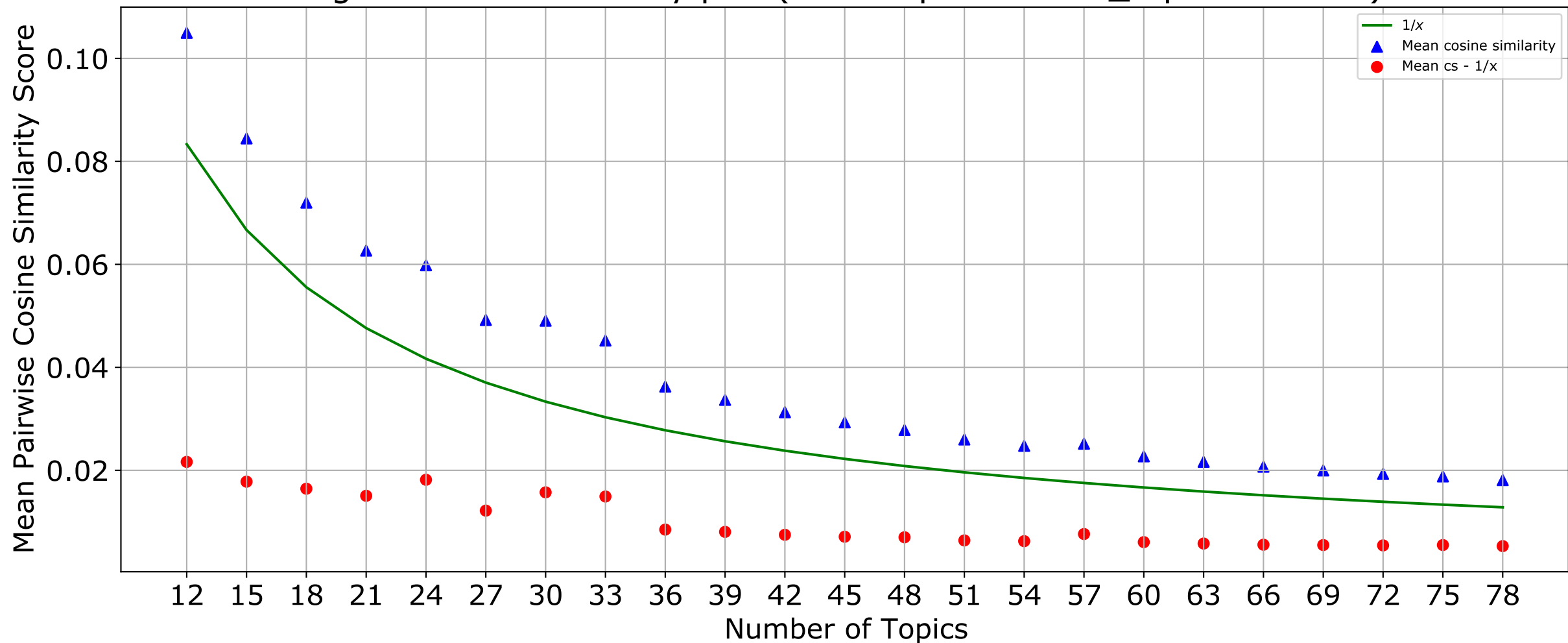
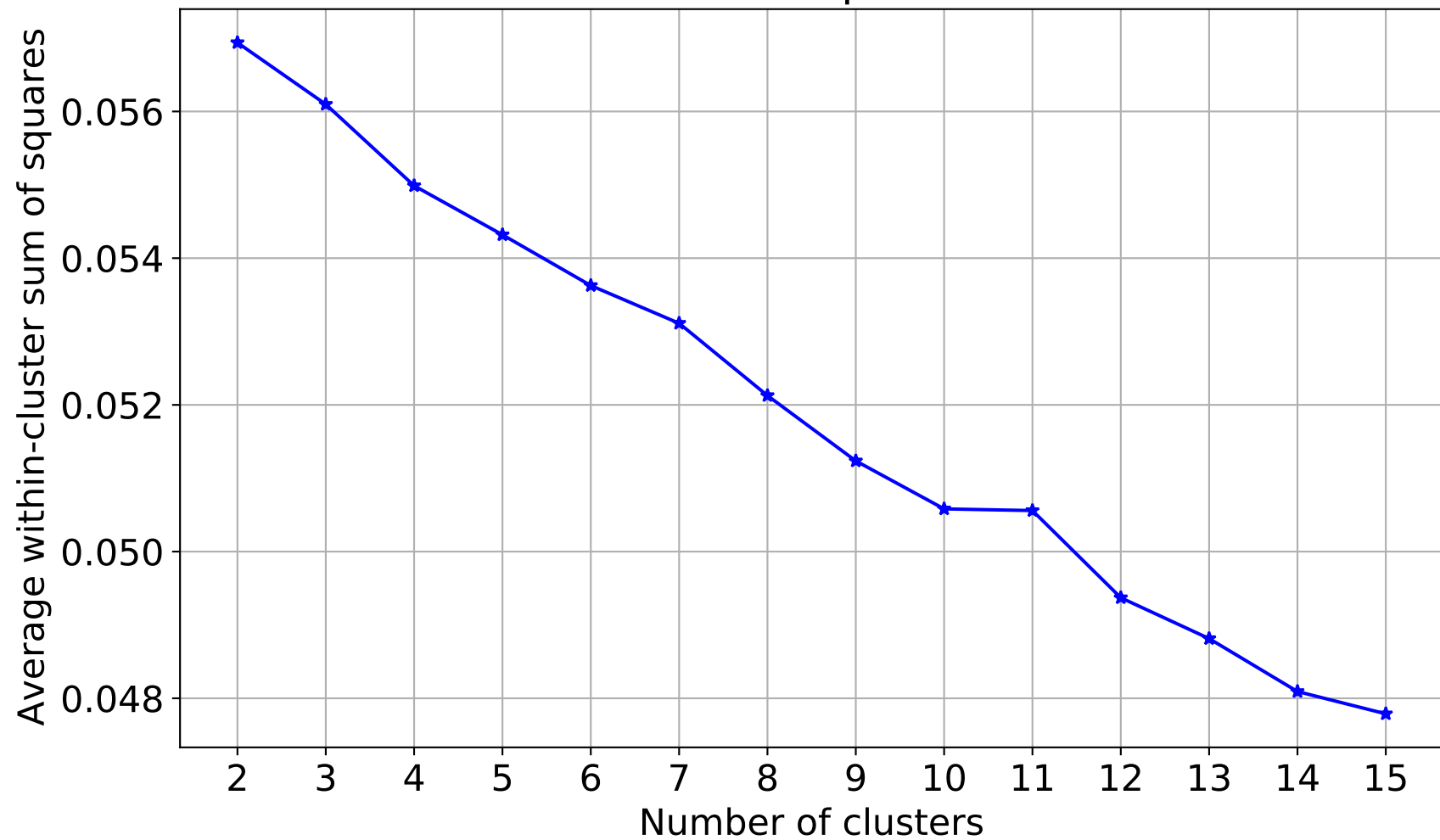


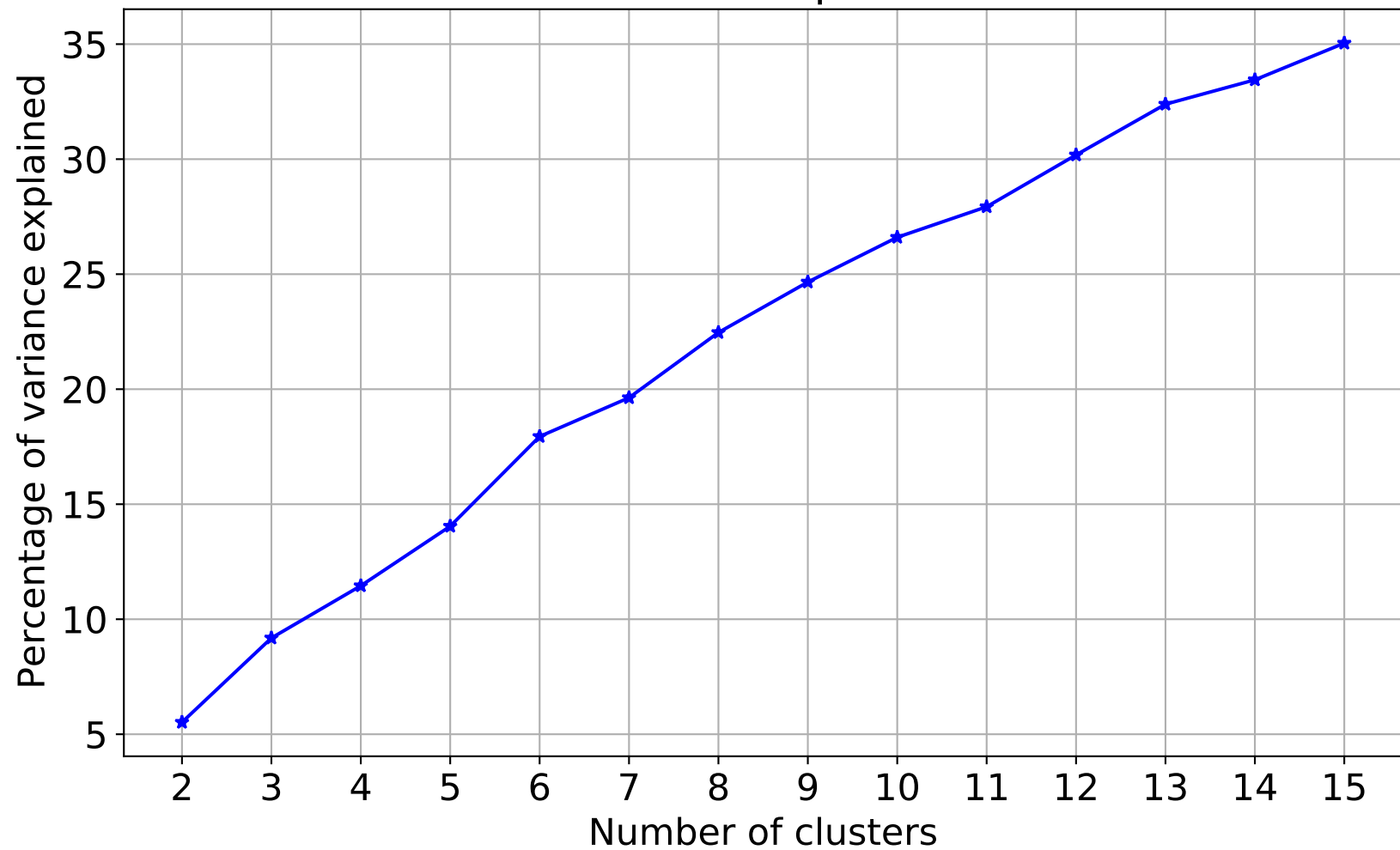
Fig.B: Cosine similarity plot (select optimal num_topics for NMF)



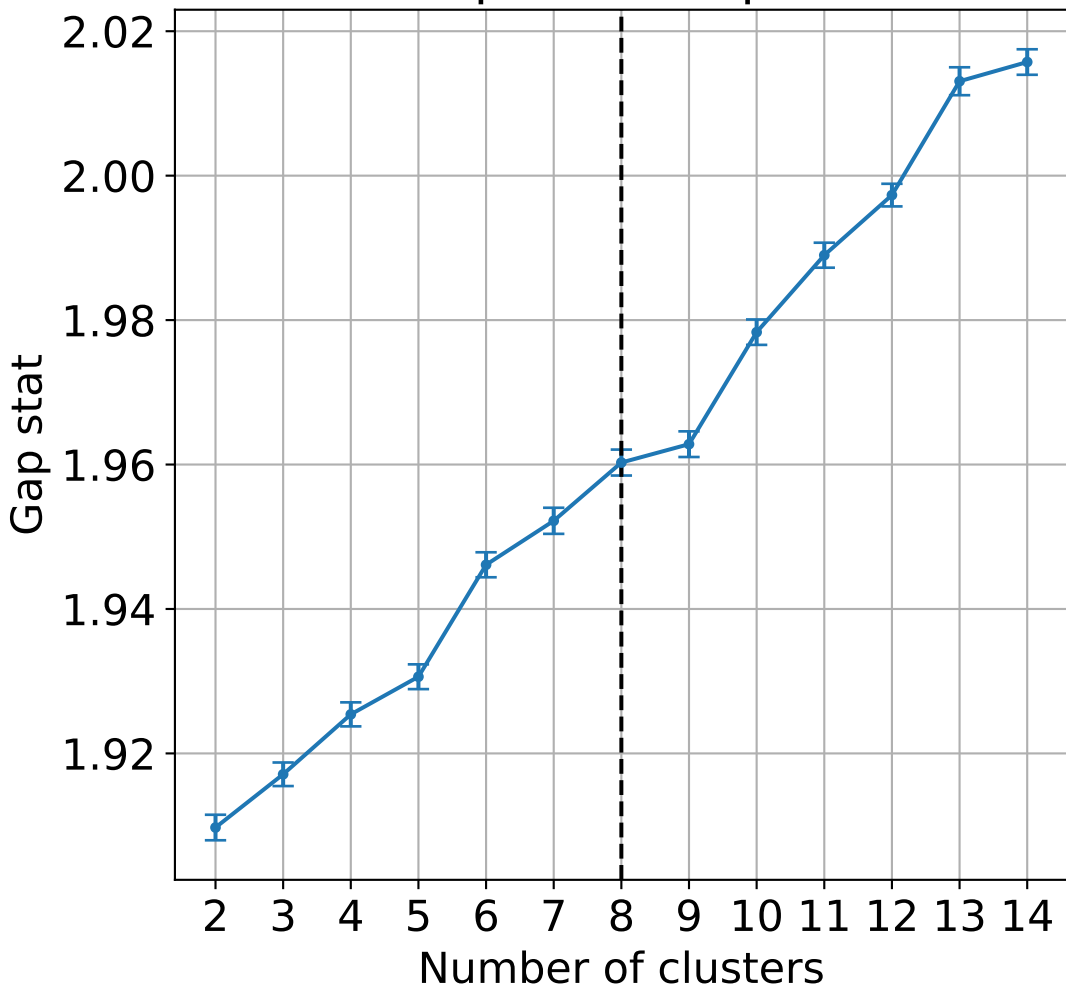
Elbow plot



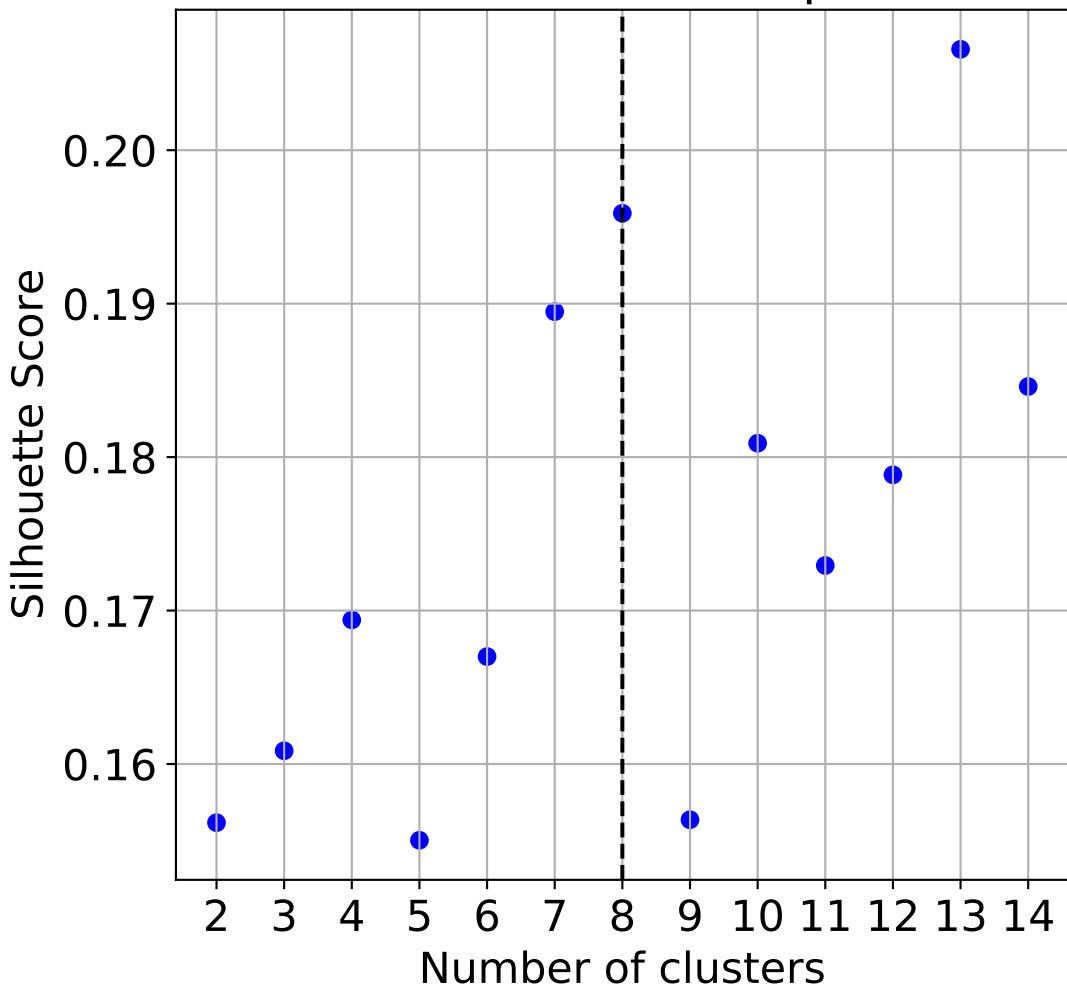
Variance explained



Gap statistic plot



Silhouette scores plot



Mean topic loading per cluster

		Cluster							
		C1	C2	C3	C4	C5	C6	C7	C8
Topic	go, back, go_back, happen, way, school, away, let, come, normal, see, wrong, tell, us, without, ahead, forc, realli, go_ahead, mandatori (T1)								
	vaccin, polio, mandatori, safe, develop, caus, rush, anti, forc, children, diseases, safeti, injuri, trial, autism, manufactur, compani, ss, risk, already (T2)								
	gate, bill, bill_gate, fund, foundat, trust, evil, gate_foundat, melinda, world, bill_melinda, africa, rockefel, ss, epstein, fauci, tri, microchip, plan, involv (T3)								
	thank, thank_share, much, share, interest, thank_god, info, god, great, check, look, appreci, laugh, friend, inform, cool, realli, nice, wow, man (T4)								
	lol, ok, k, sub, nice, exactli, dude, thought, funni, even, liter, that, bro, man, wrong, got, love, shit, yea, realli (T5)								
	get, sick, get_sick, wont, everyon, shot, better, canot, gona, hope, chanc, first, kid, job, still, either, shit, get_rid, rid, forc (T6)								
	fuck, shit, guy, give, idiot, stupid, oh, dumb, bullshit, kid, sub, holi, man, realli, shut, moron, cunt, em, dude, absolut (T7)								
	peopl, die, mani, kill, lot, believ, live, million, see, govern, actual, world, still, stupid, care, tri, thing, control, sick, number (T8)								
	viru, corona, mutat, spread, corona_viru, sar, polio, real, infect, isol, virus, caus, use, bodi, kill, cell, rate, strain, exist, cov (T9)								
	good, point, good_luck, luck, thing, bot, question, bad, man, idea, good_job, news, enough, job, guy, hope, scienc, day, info, sir (T10)								
	know, even, let, someon, mean, talk, yet, anyth, anyon, person, actual, realli, thing, mayb, someth, way, real, canot, doctor, better (T11)								
	would, could, rather, would_rather, thought, trust, never, even, also, see, someth, love, happen, surpris, ask, still, believ, someon, much, true (T12)								
	take, forc, chanc, take_chanc, wont, year, ill, shit, gona, im, care, first, never, away, anyon, rush, serious, mark, risk, look (T13)								
	like, look, sound, sound_like, seem, seem_like, someth, feel, feel_like, thing, realli, shit, almost, way, mean, much, act, world, time, talk (T14)								
	ye, ah_ye, ah, exactli, pleas, true, possibl, cours, answer, differ, wrong, countri, absolut, talk, actual, question, death, simpl, ill, world (T15)								
	say, thing, anyth, come, tri, didnt, someth, canot, mean, articl, evid, doctor, noth, even, guy, lie, true, believ, your, happen (T16)								
	think, realli, way, critic, happen, that, critic_think, point, actual, someth, thing, use, already, start, year, lot, mean, control, conspiraci, wrong (T17)								
	sourc, claim, pleas, believ, got, find, provid, inform, interest, news, proof, ask, websit, articl, reliabl, lmao, evid, back, credibl, reput (T18)								
	one, anoth, time, thing, got, first, day, differ, everi, mani, see, two, person, love, find, year, new, could, world, ever (T19)								
	flu, shot, flu_shot, year, got, never, everi, everi_year, season, strain, sick, time, swine_flu, flu_season, swine, gotten, coronaviru, last, mutat, ive (T20)								
	right, your, wrong, hope, human, time, thing, left, mark, wing, right_wing, away, mean, conspiraci, beast, damn, free, believ, could, come (T21)								
	make, sens, make_sens, money, mandatori, make_mandatori, tri, point, look, compani, even, doesnt, canot, sick, big, differ, feel, us, profit, shit (T22)								
	trump, biden, elect, support, presid, vote, militari, trump_support, trust, he, guy, push, win, bad, talk, fauci, media, state, news, donald (T23)								
	immun, need, system, immun_system, herd, herd_immun, bodi, diseases, cell, antibodi, already, time, natur, respons, infect, enough, fight, human, help, popul (T24)								
	work, that, time, way, understand, school, exactli, back, home, doesnt, cure, compani, job, requir, idea, also, travel, healthcar, start, hospit (T25)								
	post, conspiraci, comment, see, sub, great, op, r, point, time, shill, reddit, thread, r_conspiraci, remov, question, real, video, repli, theori (T26)								
	effect, side, side_effect, long, term, long_term, safe, studi, year, see, drug, trial, risk, safe_effect, time, potenti, advers, possibl, use, also (T27)								
	said, well, never, shit, thing, put, anyth, mandatori, liter, also, done, true, word, that, friend, might, ok, didnt, thought, militari (T28)								
	covid, death, die, rate, number, caus, case, death_rate, already, hospit, diseases, coronaviru, cure, report, infect, kill, patient, count, sar, strain (T29)								
	dont, believ, understand, care, trust, your, that, see, im, cant, worri, doesnt, give, realli, even, either, scienc, wont, there, dont_forget (T30)								
	test, posit, use, pcr, time, test_posit, year, even, pcr_test, fals, drug, studi, first, trial, safeti, month, neg, result, fals_posit, human (T31)								
	sure, yeah, im, that, im_sure, pretti, pretti_sure, oh, man, gona, talk, hell, mean, sorri, hope, tri, shit, thing, dude, your (T32)								
	mask, wear, wear_mask, even, distanc, social, everyon, social_distanc, still, stop, face, spread, see, keep, mandat, live, store, lockdown, forc, mask_wear (T33)								
	want, us, let, forc, world, govern, give, live, control, whatev, choic, see, let_us, realli, believ, life, everyon, chip, popul, whatev_want (T34)								
	link, read, articl, studi, comment, find, pleas, actual, look, interest, show, claim, read_articl, video, polio, evid, here, provid, research, autism (T35)								
	agre, exactli, point, total, thing, complet, absolut, could, happen, also, disagre, much, choic, everyth, someth, lmao, expect, anyth, first, agenda (T36)								