

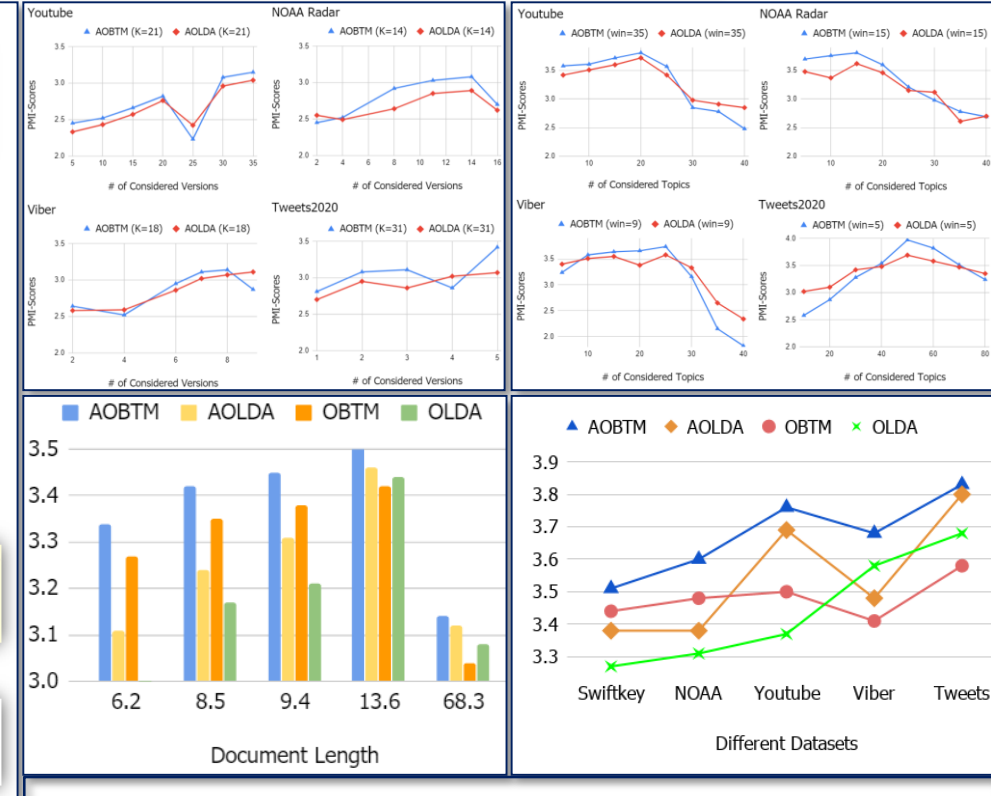
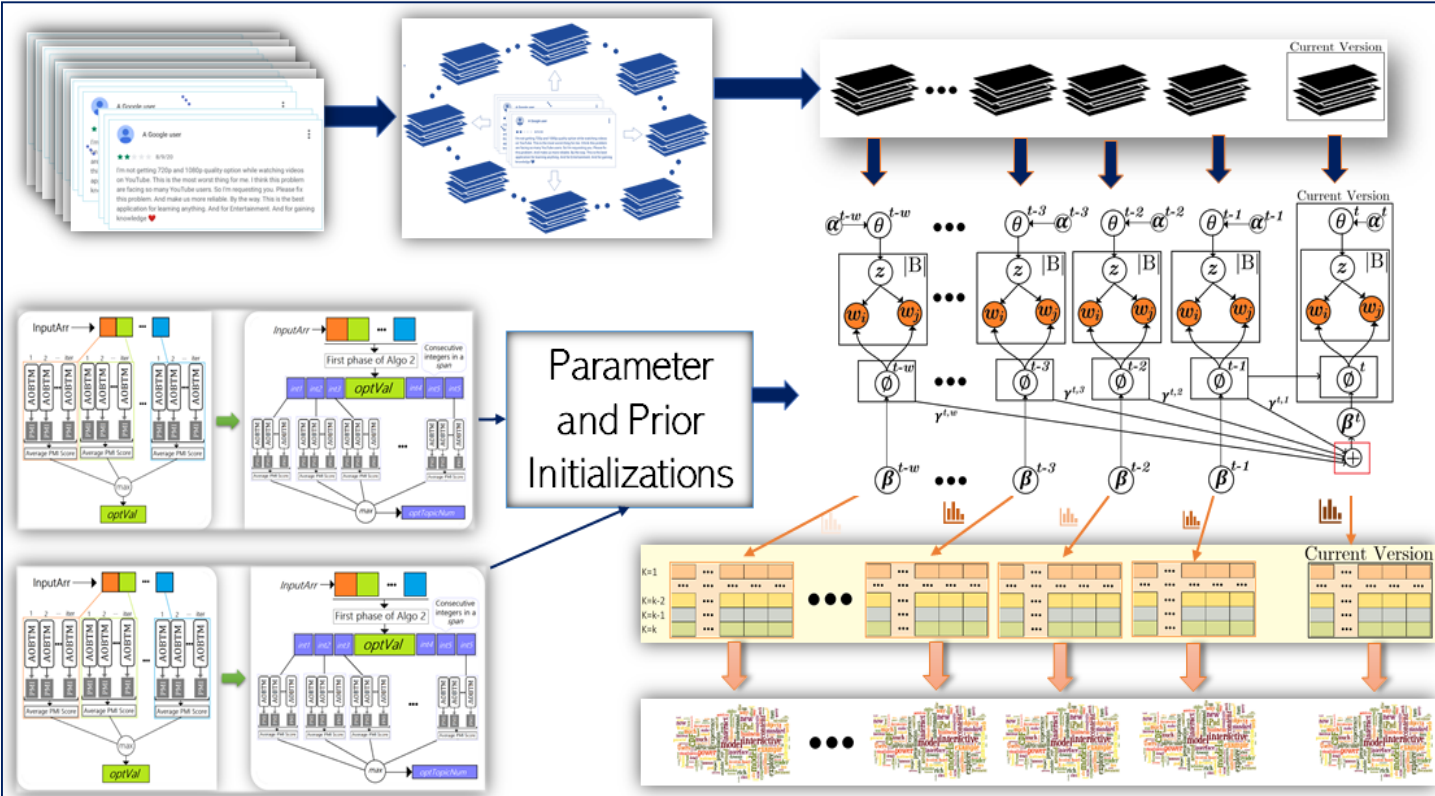


AOBTM: Adaptive Online Topic Modeling For Version Sensitive Short Texts



AOBTM is designed for short-text corpora to capture topics over different time slices using previous topics' prior distributions

EMERGING TECHNOLOGIES: BC'S AI SHOWCASE
Presenters: Mohammad A Hadi, Fatemeh H Fard



R E S U L T S

METHODOLOGY

GitHub Link: <https://github.com/Mohammad-Abdul-Hadi/AOBTM-Adaptive-Online-Biterm-Topic-Modeling>

Applications

Specialty

- Parallel implementation for faster topic extraction
- Specifically designed for short texts

- Version Sensitive App-reviews
- Time-sensitive Tweets

TIME COMPLEXITIES AND THE NUMBER OF IN-MEMORY VARIABLES IN DIFFERENT TOPIC MODELS

Methods	Time Complexities	# of Variables in Memory
LDA	$O(N_{iter}KN_D\bar{l})$	$N_DK + WK + N_D\bar{l}$
BTM	$O(N_{iter}KN_B)$	$K + WK + N_B$
OLDA	$O(N_{iter}K N_D^{(t)}\bar{l}^{(t)})$	$N_DK + WK + N_D^{(t)}\bar{l}^{(t)} $
OBTM	$O(N_{iter}K N_B^{(t)})$	$K + WK + N_B^{(t)} $
AOLDA	$O(N_{iter}K N_D^{(t)}\bar{l}^{(t)} + vKW)$	$N_DK + vWK + N_D^{(t)}\bar{l}^{(t)} $
AOBTM	$O(N_{iter}K N_B^{(t)} + vKW)$	$K + vWK + N_B^{(t)} $

Table 1

FIVE MOST CONTRIBUTING TERMS FROM TWO SAMPLE TOPICS

Topics	IDEA	OPRA
Topic 1	password	zooombomb
	meeting	password
	abuse	security
	attack	policy
Topic 2	policy	disturb
	message	group chat
	status	message
	channel	notification
	chat	transfer
	link	link

Table 2

ONLINE-RESOURCES

