

Multi-Doc Summarization

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1/21/21

Overview

- Preprocess corpus
 - Remove duplicate articles and articles with a NULL publish date.
- Initial extraction
 - Normalize all sentences (strip of leading/trailing whitespaces, make lowercase, reduce it to its stem, eg “Coughing “ -> “cough”)
 - Add a sentence to the initial summary if
 - the given theme and ≥ 1 CatE phrase is in the sentence or
 - ≥ 2 CatE phrases are in the sentence and
 - the sentence has at least 5 words, the sentence is not already in the summary, the sentence doesn't contain a weekday, begin with “but” or “and”, isn't a question, and doesn't contain an improper pronoun (eg she, he, it)
 - Only keep the 200 most relevant sentences (relevancy calculated with the sentence's cosine similarity with the theme word)

Overview (2)

- Compress initial summary
 - Remove stopwords from summary
 - If 2 sentences have a Word Mover's Distance score less than threshold 1.51, those 2 sentences are redundant
 - Delete whichever sentence has the lower tfidf score
- Extend summary (include previous and/or subsequent sentences)
 - Look at the direct previous and direct subsequent sentence from a sentence's original article. If the sentence contains the theme, include it and keep reading sentences in that direction
 - Replace the sentence with the new "chunk" of sentences
- Cluster
 - Use kmeans to cluster the summary (number of clusters = number of sentence in summary / 5)
 - Weigh theme and CatE phrases highest
 - Weigh phrases generated by AutoPhrase next
 - Weigh non stopwords next
 - Weigh stopwords the least

Economy Clustered Summary

cluster id 0

2020-04-24 00:00:00 University of Saskatchewan economist Joel Bruneau says the Saskatchewan government's plan to reopen the economy is balanced and practical. The Saskatchewan government's plan to gradually lift the coronavirus restrictions and restart the economy is earning mostly praise. Steve McLellan, CEO of the Saskatchewan Chamber of Commerce, gives the government an A for its plan to restart the economy. Ken Coates, Canada Research Chair in Regional Innovation at the Johnson Shoyama Graduate School of Public Policy said the government's plan to restart the economy contains \"just the right amount\" of detail. Saskatchewan Federation of Labour President Lori Johb says vulnerable and low-wage workers have been left out of the government's plans to restart the economy.

2020-04-21 00:00:00 \"Ontario's economy and Canada's economy need the GTHA to come back stronger than ever when the restart begins.\" Tory said the mayors and chairs met by video conference on Tuesday to discuss the impacts of COVID-19 on the region and how they can work together to get the economy restarted when the time comes. how our municipalities can work together on an united regional economic restart and recovery. <

2020-04-28 00:00:00 An economic bloodbath' Pressure to reopen the economy is starting to build. \"That would force us to reintroduce restrictions that would further disrupt society and economic conditions in our territory, and no one wants to see that.\" On Tuesday the federal government and Canada's premiers released an outline for restarting the economy.

2020-04-24 00:00:00 The Saskatchewan government's plan to gradually lift the coronavirus restrictions and restart the economy is earning mostly praise. University of Saskatchewan economist Joel Bruneau says the Saskatchewan government's plan to reopen the economy is balanced and practical. Steve McLellan, CEO of the Saskatchewan Chamber of Commerce, gives the government an A for its plan to restart the economy. Ken Coates, Canada Research Chair in Regional Innovation at the Johnson Shoyama Graduate School of Public Policy said the government's plan to restart the economy contains \"just the right amount\" of detail. Saskatchewan Federation of Labour President Lori Johb says vulnerable and low-wage workers have been left out of the government's plans to restart the economy.

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cluster id 1

2020-04-19 00:00:00 The growth of the so-called 'gig economy' bolstered the case for UBI. As millions of workers apply for help, mothers-to-be say they can't get CERB. Poloz sees parts of Canadian economy beginning to restart in 'late May' The CERB, he said, is \"kind of like a scaled-up welfare with the same welfare traps.

2020-03-24 00:00:00 The forced closure is the latest example of how the coronavirus pandemic is wreaking havoc on the Canadian economy, threatening to stifle growth and putting countless people out of work.

2020-04-17 00:00:00 Poloz sees parts of Canadian economy beginning to restart in '

Cluster 0 seems to be mostly about Saskatchewan, a province in Canada. Cluster 1 talks about trying to restart the economy after the forced closure.

cluster id 2

2020-04-22 00:00:00 Nevertheless, officials were increasingly focused on restarting the flagging economy.

2020-03-17 00:00:00 Portfolio Management Corp. \"Given the stimulus that's in the economy The board said the economy could start to rebound in the fourth quarter during 2021 – with oil projected to top \$50 – Now, he projects zero growth in Alberta for 2020 and to remain in recession. However, the board said growth should resume in the third quarter but suggests that any hopes for an economic turnaround in Alberta for 2020 will not happen. \"After slowing to end the year, economic growth has been weak in the first quarter and is expected to contract in the second quarter to 2.7 per cent,\"

2020-04-03 00:00:00 \"This pandemic and this economic fallout will permanently reshape our economy,\" The COVID-19 pandemic and its related economic fallout is poised to change Alberta's economy permanently, says ATB chief economist Todd Hirsch.

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2020-03-03 00:00:00 As well as plenty of pressure from investors for rate cuts as a measure to stop stock market declines, OECD chief economist Laurence Boone yesterday called on governments, including central banks, to act quickly to prevent damage to the wider economy. \"The main question for the economic outlook is how long and how widely the virus will spread, and with it the containment measures,\" said Boone. But for central bank economists one of the concerns will be that a synchronized decline in supply and demand will mean the economy operates far below capacity. AnalysisCoronavirus could be the global shock that economists have feared Boone called for a joint statement by governments on those actions that would reassure all the participants in the global economy, leading to a medium-term recovery.

2020-03-11 00:00:00 That should be sufficient, Legault said, to offset an economic slowdown, which economists say is a distinct possibility given the coronavirus outbreak is already disrupting economies in Asia and Europe. Premier François Legault defended his government's response to the COVID-19 pandemic, one day after tabling a budget that is free of measures to deal with the outbreak and forecasts it will have no impact on Quebec's economic growth. Legault also said his finance minister has a struck a committee to ready a stimulus package, in case Quebec's economy also starts to falter. The global economic outlook hasn't improved since then.

2020-04-16 00:00:00 This is less damaging than cutting during the pandemic as the economy is less sensitive to government spending in economic boom times. COVID-19 has world's major economies on track for worst quarterly decline in historyIMF says coronavirus recession will be worse than 2008, as UN appeals for aid for poorest economies Austerity was tried in Europe following the financial crisis of 2008.

Cluster 2 seems a little general, about the virus' effect on Canada's economy.

22 cluster id 3

23 2020-02-14 00:00:00 China is struggling to restart its economy after the outbreak of the coronavirus. But until they're here and they see the technology and get the demos and meet the people, we can't make too much progress.\" Budget watchdog slashes economic growth projections, partly blames coronavirusAnalysisCoronavirus could be the global shock that economists have feared: Don Pittis The Manitoba Technology Accelerator was also going to make an announcement in April about a medical device assembly company with about \$2 million of money from Chinese investors.

24 2020-02-25 00:00:00 The fears of the coronavirus derailing the world's economy come at a time when another closely watched economic indicator – earnings at Canadian banks – suggest that Canada's economy is doing well. we're finally waking up to the fact that this issue could go on for a while, and have a significant impact on Chinese and global economic growth and potentially the United States,\" said Randy Frederick, vice-president of trading and derivatives for money manager Charles Schwab.

25 2020-02-28 00:00:00 Director of the National Economic Council Larry Kudlow said the U.S. economy is sound. The White House's top economic adviser, Larry Kudlow, told reporters the U.S. economy was \"sound\" and said the Trump administration was not planning to take any \"precipitous\" policy actions at this time. The index suffered its biggest weekly drop since the 2008 global financial crisis on fears the economic disruption caused by the coronavirus could lead to a recession. Federal Reserve Chair Jerome Powell said the coronavirus posed evolving risks to economic activity, adding that the U.S. central bank was \"closely monitoring\" developments and would act as appropriate to support the economy.

26 2020-04-20 00:00:00 \$1.1 trillion US to expand cash payouts to its citizens, as the fallout from the coronavirus pandemic threatens to push the world's third-largest economy deeper into recession. 3:24 Japan boosted its new economic stimulus package on Monday to a record The German economy is in a severe recession and recovery is unlikely to be quick, as many coronavirus-related restrictions could stay in place for an extended period, the Bundesbank said in a regular monthly economic report on Monday. Some shops are reopening in much of Germany as Europe's biggest economy takes its first tentative step toward restarting public life after a four-week shutdown.

27 2020-01-27 00:00:00 Economic fallout World shares slipped to their lowest in two weeks as worries grew about the economic impact of the coronavirus on China, the world's second-biggest economy.

28 2020-01-31 00:00:00 A shock to the global economy' Ross Prusakowski, an economist with Export Development Canada, said the coronavirus and the related response are already having an impact on the world economy.

29 2020-03-13 00:00:00 That measure will include more aggressive steps to boost the U.S. economy, which economists fear has already slipped into recession.

Cluster 3 seems to focus more on the economies of countries outside of Canada, including China, Japan, the US, Japan, and Germany.

cluster id 4

2020-02-11 00:00:00 A global economy already close to recession may be pushed over the line. warns that coronavirus will have a 'real' impact on Canadian economy Places like Europe, already glutted with monetary stimulus, may demand more with uncertain results. And whether he was referring to the coronavirus, its impact on the global economy or the Alberta oil industry, the finance minister said that Canada must have the economic resiliency to face the unexpected.

2020-04-25 00:00:00 Without government support, the authors argue, huge structural problems with the economy will prolong the economic impact of the pandemic. In order to prevent the collapse of the economy, aggressive fiscal and monetary policy become the order of the day. In the 2008 Great Recession, the opposition parties forced Conservative Prime Minister Stephen Harper to pass a massive fiscal stimulus package to prevent unemployment and bankruptcy. Canada's economy is in for a rough springAnalysisThe Great Recession nearly killed Harper's government – and COVID-19 could be worse The treasury bailed out the financial system and Obama's \$800-billion stimulus bill extended unemployment benefits, rebuilt roads and bridges, prevented teacher layoffs and provided temporary help for people who lost their jobs or needed other assistance because of the poor economy. For economists like Paul Krugman, while the stimulus prevented a deeper decline in the economy, it should have been much larger. Members of Manitoba's business community have described the province's approach as \"penny wise and pound foolish.\" As Stiglitz suggests, such cutbacks in jobs and funding \"will show up in the unemployment statistics, but the deeper effects – on our economic growth and social fabric – won't be fully apparent for years to come.\" No other government in Canada has done more to damage our future with less economic justification than the government of Manitoba.

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Cluster 4 is similar to Cluster 2, talking about Canada's economy as a result of the virus, but goes into more detail, such as referencing the 2008 Great Recession.