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Kia Siang Hock

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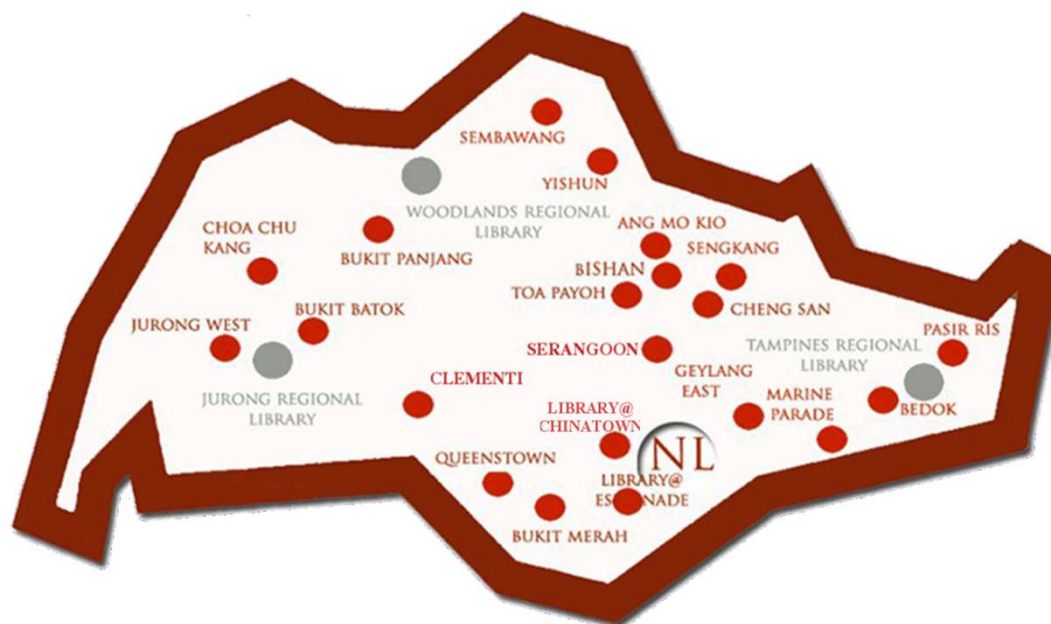




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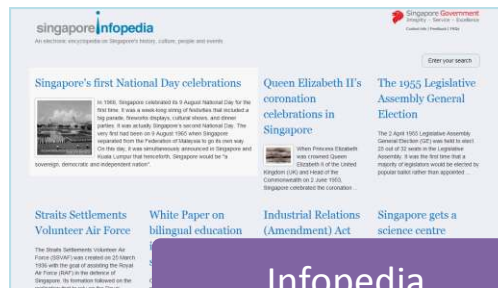




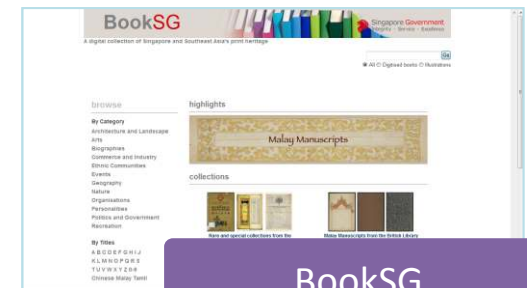
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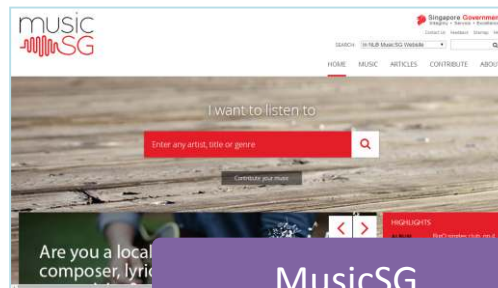
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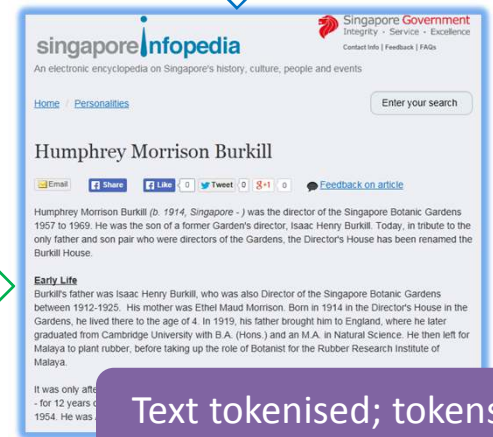
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Singapore Memory

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Using Text Analytics to Connect Content



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Sir Stamford Raffles established the first Botanic Gardens in Singapore in 1822 along the slopes of Fort Canning Hill. With Nathaniel Wallich as the first superintendent of the gardens, plants indigenous to Singapore were cultivated and their suitability as cash crops evaluated. This government effort saw the closure of the experimental gardens in 1829. A public effort followed between 1836 to 1840 which saw a seven-acre plot at the foot of Fort Canning Hill being cultivated. Only in 1859 were the grounds at Tanglin, where currently the Botanic Gardens stand, given for the development of a public garden.

Early History
The first Botanic Gardens, initiated by Raffles, was located on the slopes of Government Hill (now known as Fort Canning Hill). Its purpose then was the experimental cultivation of plants, such as nutmeg and clove, to evaluate their economic value and suitability as cash crops. It occupied 58 acres and was supervised by Nathaniel Wallich (DN), a Danish surgeon and naturalist who had previously been the Superintendent of the Royal Gardens in Calcutta. However, it proved to be too expensive to upkeep and was abandoned in June 1829.

Public Effort
On 24 May 1836, the Agricultural and Horticultural Society was formed and one of its initial actions was to call for the government of that day to encourage agriculture and its development. This appeal led to a grant of seven acres of land around the foot of Fort Canning Hill. However, by 1840, the society became defunct.

At Tanglin
The present Botanic Gardens, located in Tanglin district, was set-up by a revived Agri-Horticultural Society in 1859. The 23-ha plot was acquired from Hoo Ah Kay (Wahpoo), an influential businessman. Lawrence Hiven, a supervisor of an adjoining nutmeg plantation was enlisted to develop the area into a pleasure garden. Roads, terraces and a landscaped were constructed in the Gardens. Almost the entire original layout designed 142 years ago remains today. The Gardens expanded with the acquisition of additional surrounding land. A zoo was added to attract more visitors. The role of the Gardens then was mostly recreational. Growing financial difficulties finally forced the management of the Botanic Gardens to be handed over to the Colonial Government in 1874.

The Gardens assumed a more scientific and economic role with the appointment of Kew-trained botanists and horticulturalists as administrators of the grounds. Under their directorships, the Botanic Gardens was again tasked with the study of new plant species for commercial exploitation, and also with hybridising experimentation, especially with orchids. Thus, the Gardens became well known for introducing and promoting many plants of economic value to Southeast Asia, especially the Para rubber tree by Henry Ridley, the father of the region's rubber industry, and the hybrid orchid.

During the 1970s and 1980s, the role of the Gardens was geared more towards satisfying the recreational needs of Singaporeans. Many of the Gardens' amenities and visitor attractions were improved while under care of the Parks and Recreation Department.

On June 1990, the Singapore Botanic Gardens came under the management of the National Parks Board. A Redevelopment Master Plan was drawn up to provide new and improved public amenities, research infrastructure and training facilities. It was to be carried out in three phases spanning 1990 to 2005. Today, the Gardens houses over 2,700 species and hybrids, a collection of 650,000 specimens of dried and pressed plants and a comprehensive 22,000-volume library. This makes it one of the most important centres for plant taxonomic and biodiversity research in the region, apart from a recreational and educational attraction for local and international visitors alike.

Author
Phyllis Wee

References
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Makpeacock, W., Brooks, G. E. & Bradbell, R. St. J. (Eds.) (1991). *One hundred years of Singapore* (pp. 63-79). Singapore: Oxford University. (Call no.: R5NG 959.97 ONE)

Tay, E. P., et al. (1989). *A practical guide to the Singapore Botanic Gardens*. Singapore: Singapore Botanic Gardens. (Call no.: R5NG 580.7445957 PIC)

Tanaka, R. (1987). *Singapore: A history and guide to the Botanic Gardens*. Singapore: Times Book International

Recommendations

- [Humphrey Morrison Buxton](#)
Humphrey Morrison Buxton (b. 1914, Singapore -) was the director of the Singapore Botanic Gardens 1967 to 1985. He.
- [Richard Eric Holttum](#)
Richard Eric Holttum (b. 20 July 1895, Linton, Cambridgeshire, England - d. 18 September 1980, London) was the Director.
- [National Orchid Garden](#)
The National Orchid Garden (NOG) is located in the Centre Core of the Singapore Botanic Gardens at 1 Cluny Road. Officially...
- [Sir Henry Nicholas Ridley](#)
Sir Henry Nicholas Ridley C.M.G. (1811, H.A. (Osian), F.R.S., F.L.S., F.R.H.S. (d. 10 December 1885, Westbury, Wilt.)
- [Fort Canning Park](#)
Fort Canning Hill is a hill in Singapore. It was the site of a fort built by the British in 1819. The hill is 150 m high, and is located...
- [Bukit Timah Nature Reserve](#)
The Bukit Timah Reserve, Upper Bukit Timah Road, 1519 ha, is part of a limited area of primary rainforest left on Singapore...

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Botanic Garden, 203, 1890s : general view

Lambert, G. R.



Tags

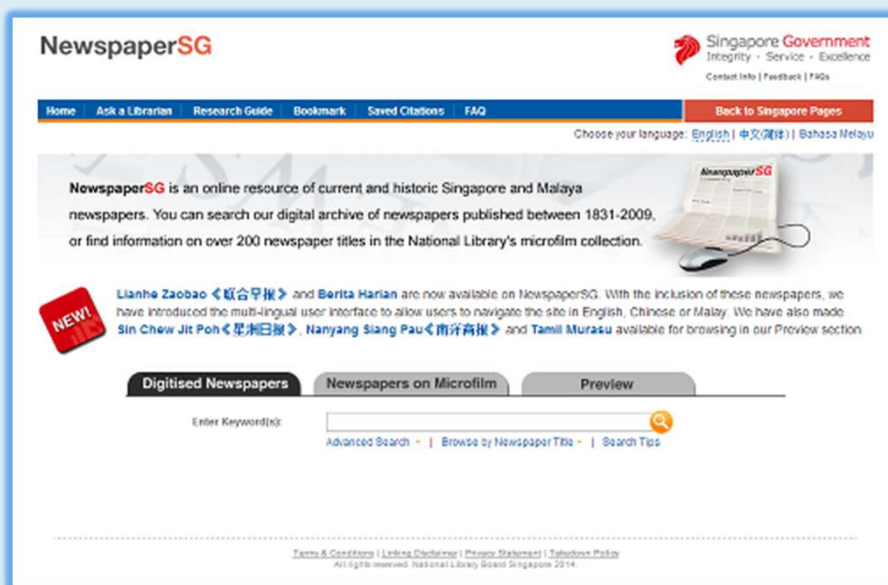
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This 1890s photograph from G.R. Lambert & Co shows a view of the Botanic Gardens, located in the Tanglin district. It was set-up by a revived Agri-Horticultural

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Hoylake's bid for BAT Industries

LONDON — Hoylake Investments Ltd intends to pursue a takeover of BAT Industries PLC, Anglo Group PLC said on Wednesday.

Anglo Group is a company created by Anglo-French financier Sir James Goldsmith and British merchant banker Jacob Rothschild.

Anglo Group holds a stake in Hoylake, a company also formed by Sir James and Mr Rothschild with Australian entrepreneur Kerry Packer, to launch a \$40.95 billion takeover of the British...

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Congressmen urge Baker to express concern to UK govt

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BAT abandons \$776m issue due to hostile bid

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3	42877	/straitstimes/29 July 1989/straitstimes19890729.2.55.23.txt	View	0.417389060632478
4	14251	/straitstimes/15 July 1989/straitstimes19890715.2.88.txt	View	0.39050929177177
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2 key factors that determine the processing resources required:
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Number of articles

20 million articles

20 million X 20 million
pairs to compute for
similarity values!!

Number of dimensions

OCR errors



SINGAPORE, Fri. A lion with a fish tail rising from a shimmering **pea** on which the words "Lion City" appear has been adopted by the Tourist Promotion Board as its emblem. This emblem will be used **in** all the Board's **piomotional** material.

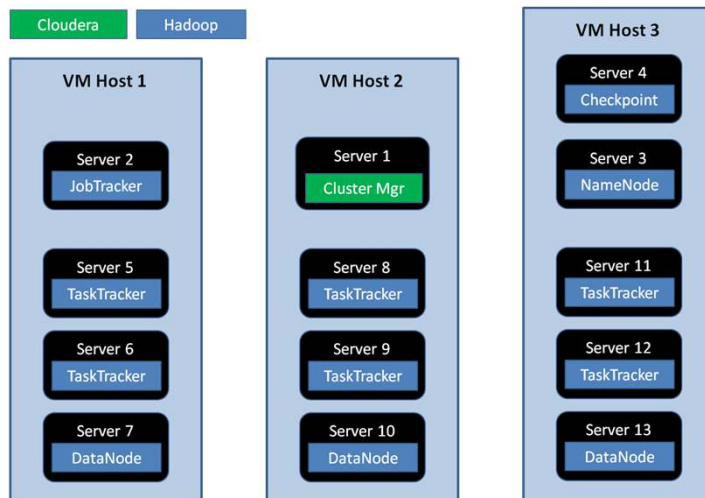
of dimensions for 6.28 m English articles: 5.78m

of words in WordNet: 155,287



The Initial Attempts

Increase # of servers



Reduce # of dimensions

Minimum support	Minimum document frequency	Max document frequency percentage	No of dimensions
2	1	90	5,780,000
7	7	90	1,521,828
7	7	25	1,521,828
10	10	25	1,119,369
30	10	25	473,883

4 years of English newspaper articles processed in 4 days



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Housing and Development Board (HDB)

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The Housing and Development Board (HDB) is the national public housing authority of Singapore and it is currently headquartered at HDB Hub in Toa Payoh. It was formed in February 1960, shortly after Singapore attained self-government, to alleviate the severe housing shortage facing the state at the time. Through the years, the emphasis of its housing programmes has shifted from quantity of housing to quality of life. Since 1985, its flats have been housing over 80% of Singapore's resident population.

Background

HDB was formed as a direct result of the failure of its predecessor, the Singapore Improvement Trust (SIT), to provide adequate housing for the people. SIT was established in 1927 by the colonial government at a time when Singapore was facing an acute housing shortage. By the time SIT was replaced by HDB in 1960, the housing problem had worsened significantly as its building programmes had fallen far short of what was required to keep pace with the fast-growing population.

The first step towards the formation of HDB was taken in August 1958 with the introduction of the Housing and Development Bill in the legislative assembly. The bill was passed in January 1959 and came into effect on 1 February 1960, thus bringing HDB into existence to succeed SIT as Singapore's housing authority. Its primary function was to build and manage housing units for the low-income groups, and it had to produce the maximum output in the minimum time and at the lowest

Key Phrase
Extraction

HDB flats, public housing, new flats, home ownership, home ownership rate, housing shortage, HDB Hub, Background HDB, housing programmes, housing authority, housing problem, housing units, HDB home ownership, housing estate, estate renewal strategy

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Almost there...

Major oil spills in the Straits of Singapore

The Straits of Singapore, 48 km long and 3.1 km wide, lies between Singapore and the Riau Archipelago, Indonesia, and links the Straits of Malacca to the South China Sea. It is on the shipping route of the Asia-Pacific region linking West Asia to Europe. This makes it as one of the busiest sea-lanes in the world. Furthermore, Singapore is the busiest port as well as one of the largest oil refining centres in the world. This makes the Straits highly vulnerable to oil spills. It is considered one of the world's hot spots for oil spills. Singapore and Malaysia together have suffered at least 39 spills of 34 tons or more since 1960

Recognising the high vulnerability of the Straits to incidents leading to oil spills...

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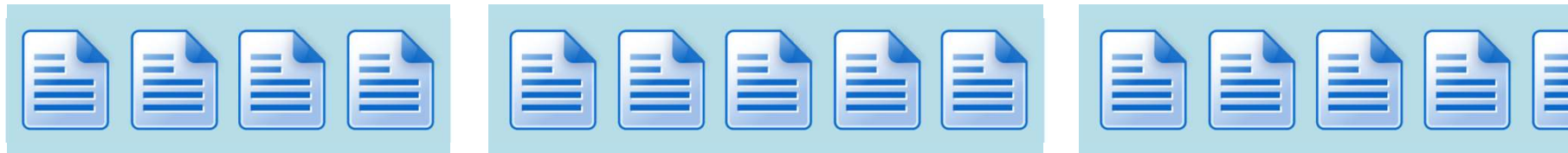


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Mahout K-Means Clustering
with Cosine Distance





Clustering – Final Piece to the Puzzle

Size of cluster	Top 50 stemmed terms in the cluster
86,881	olymp, athlet, game, sport, medal, event, team, gold, championship, record, world, singapor, metr, swim, won, year, champion, win, nation, women, time, coach, asian, meet, competit, train, swimmer, two, second, race, compet, first, amateur, bronz, intern, associ, best, finish, yesterdai, silver, old, on, relai, men, set, track, medallist, mark, south, run
142,289	school, student, educ, teacher, univers, secondari, singapor, children, year, primari, studi, pupil, parent, mr, teach, colleg, cours, ministri, english, languag, chines, on, institut, examin, time, learn, princip, train, programm, work, graduat, help, nation, class, two, govern, girl, scienc, boi, first, level, malai, centr, make, dr, academ, dai, organis, scholarship, junior
125,629	polic, arrest, offic, suspect, two, men, yesterdai, man, investig, report, found, mr, gang, road, raid, on, station, crime, detain, year, night, arm, robberi, car, believ, peopl, forc, charg, singapor, robber, hous, todai, told, stolen, seiz, spokesman, old, held, four, escap, murder, reuter, chines, detect, member, street, made, drug, dai, home

67 clusters averaging 93,000 articles each

Clustering – Final Piece to the Puzzle

By Language	# of articles
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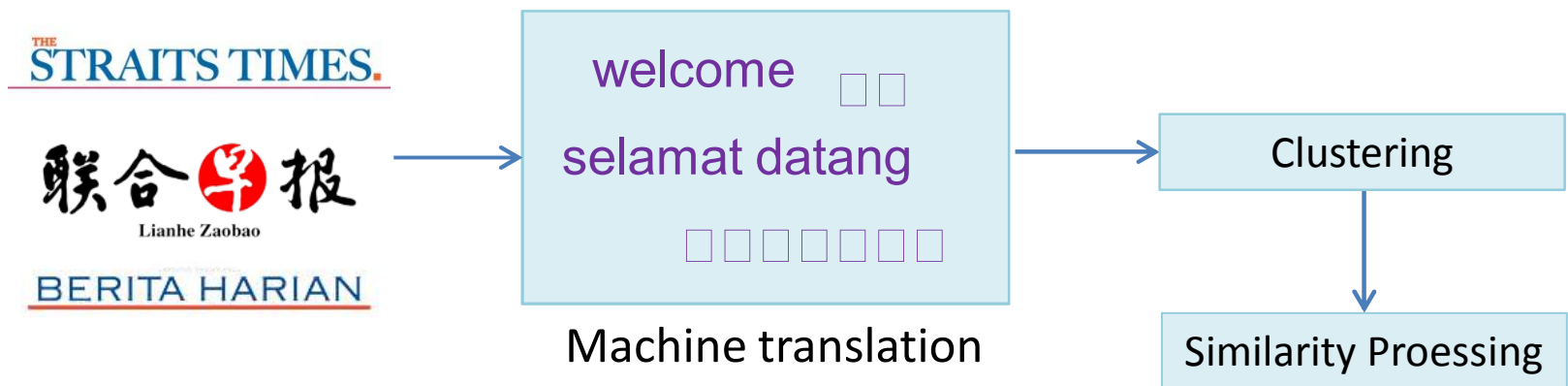
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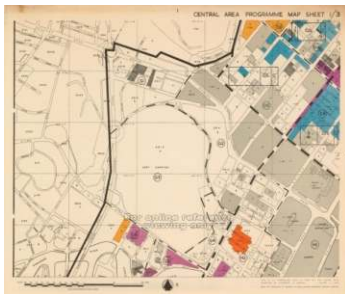
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Master Plan for Singapore - Central Area (1958)

The Cenotaph, located at Esplanade Park along Connaught Drive, is a war memorial which commemorates the sacrifice of the men who perished during World War I and World War II. It was unveiled on 31 March 1922 by the Prince of Wales. On 28 December 2010, it was gazetted as a national monument together with two other structures in Esplanade Park, the Lim Bo Seng Memorial and the Tan Kim Seng Fountain...

Lim Bo Seng (Article)

Major-General Lim Bo Seng (b. 27 April 1909, Nan Ann, Fujian, China - d. 29 June 1944, Perak, Malaya) was a prominent ...

Dalhousie Obelisk (Article)

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Gwee Peng Kwee (Oral History)

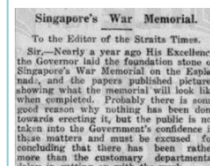
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Questions?

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