



Contextual understanding and response generation with high-dimensional embeddings using Generative Artificial Intelligence

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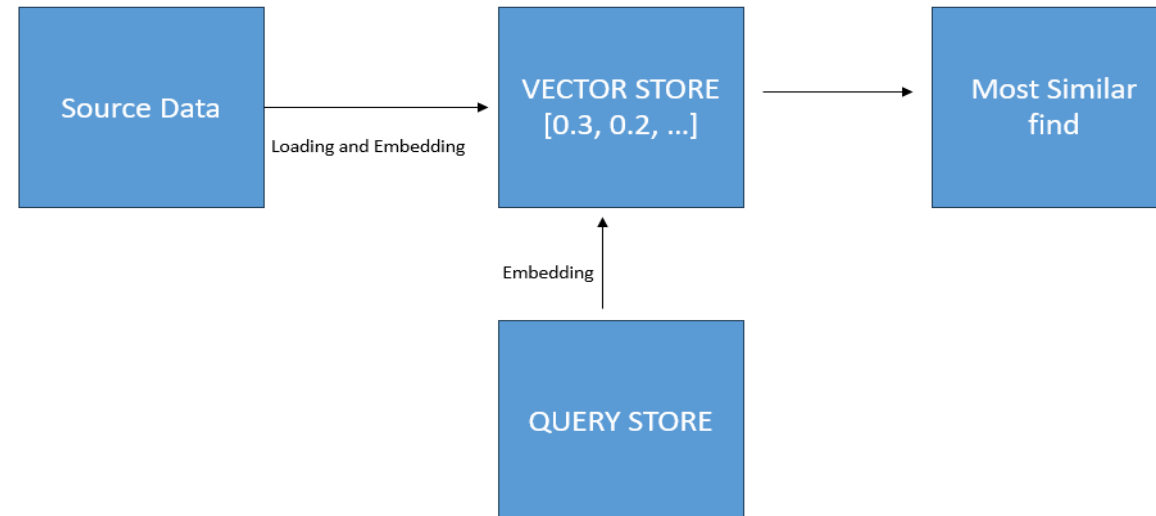


Problem statement

With so much of information and data abundance, documents analysis is difficult, the challenge is with huge volume and unstructured data. It is tough to extract meaningful information in a domain/context aware manner.



Solution Architecture



CONF42 SITE RELIABILITY ENGINEERING (SRE) 2025

APRIL 17 • ONLINE



← → ↻ localhost:3000

Choose File 10th-english-science-1.pdf Upload

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{"success":true,"text": "\n\nGovernment of Karnataka\nSCIENCE\nPART - 1\nTENTH STANDARD\n10\nKarnataka  
Textbook Society (R.)\n100 Feet Ring Road, Banashankari 3rd Stage, Bengaluru - 85\nKTBS\nNot to be re  
published\nnii\nSecond Edition\nMarch 2019\nKTBS\nNot to be re  
published\nniii\nForeword\nthe National Curriculum Framework, (NCF), 2005, recommends that children's life at  
school must be linked to their life outside the school. This principle marks a departure from the  
legacy of bookish learning which continues to shape our system and causes a gap between the school,  
home and community. The syllabi and textbooks developed on the basis of NCF signify an attempt to  
implement this basic idea. They also attempt to discourage rote learning and the maintenance of sharp  
boundaries between different subject areas. We hope these measures will take us significantly further  
in the direction of a child-centred system of education outlined in the National Policy on Education  
(1986). The success of this effort depends on the steps that school principals and teachers will take to  
encourage children to reflect on their own learning and to pursue imaginative activities and questions.  
We must recognise that, given space, time and freedom, children generate new knowledge by engaging with  
the information passed on to them by adults. Treating the prescribed textbook as the sole basis of  
examination is one of the key reasons why other resources and sites of learning are ignored.  
Inculcating creativity and initiative is possible if we perceive and treat children as participants in  
learning, not as receivers of a fixed body of knowledge. These aims imply considerable change in  
school routines and mode of functioning. Flexibility in the daily time-table is as necessary as rigour  
in implementing the annual calendar so that the required number of teaching days are actually devoted  
to teaching. The methods used for teaching and evaluation will also determine how effective this  
textbook proves for making children's life at school a happy experience, rather than a source of stress  
or boredom. Syllabus designers have tried to address the problem of curricular burden by restructuring  
and reorienting knowledge at different stages with greater consideration for child psychology and the  
time available for teaching. The textbook attempts to enhance this endeavour by giving higher priority  
and space to opportunities for contemplation and wondering, discussion in small groups, and activities  
requiring hands-on experience. The National Council of Educational Research and Training (NCERT)  
appreciates the hard work done by the textbook development team responsible for this book. We  
wish to thank the Chairman of the advisory group in science and mathematics, Professor J.V.  
Narlikar and the Chief Advisor for this book, Professor Rupamanjari Ghosh, School of Physical Sciences,  
Jawaharlal Nehru University, New Delhi, for guiding the work of this committee. Several teachers  
contributed to the development of this textbook; we are grateful to them and their principals for  
making this possible. We are indebted to the institutions and organisations which have generously  
permitted us to draw upon their resources, material and personnel. We are especially grateful  
to the members of the National Monitoring Committee, appointed by the Department of Secondary and  
Higher Education, Ministry of Human Resource Development under the Chairmanship of Professor  
Mrinal Miri and Professor G.P. Deshpande. for their valuable time and contribution. As an organisation
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Domain based response is received of uploaded PDF with stored embeddings.

(A Science English PDF textbook is uploaded to derive domain knowledge of uploaded document)

User: what is an alkali?

AI Assistant: alkali is a base that dissolves in water.

User: What is coated on surface of copper powder?

AI Assistant: The surface of copper powder becomes coated with black copper.



Thank You

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