# Semantic Search Over Text

Yujian Tang

# Speaker
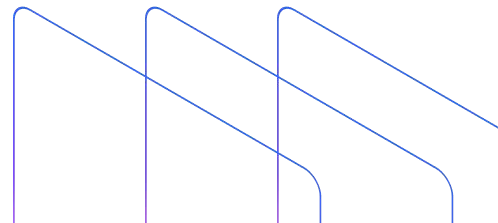
## Yujian Tang

Developer Advocate, Zilliz
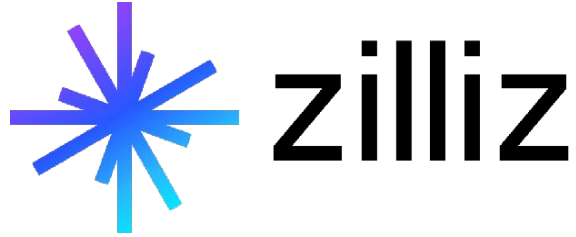
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https://www.linkedin.com/in/yujiantang
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# Company

zilliz

🐦 **@Zilliz_Universe**

in **linkedin.com/in/zilliz**

**milvusio.slack.com**

**github.com/milvus-io/milvus**

**zilliz.com**

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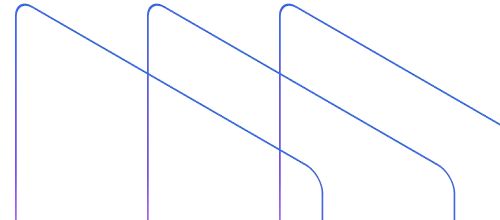
# 01

# What is Semantic Search?
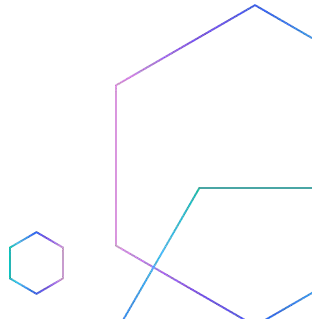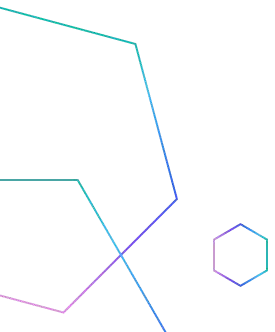
# Semantic Similarity
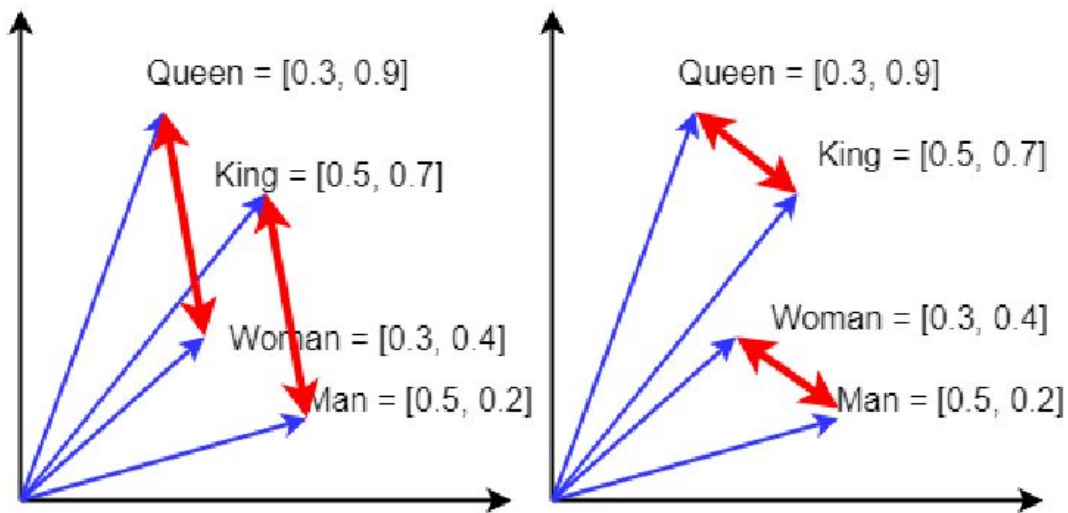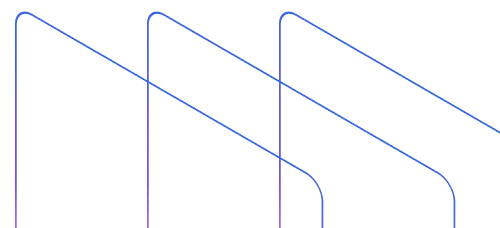
- Some words are similar
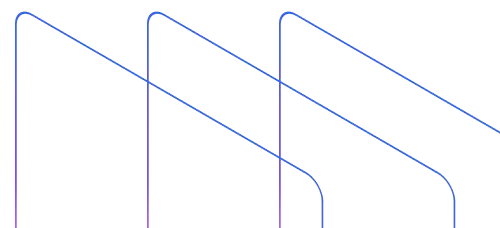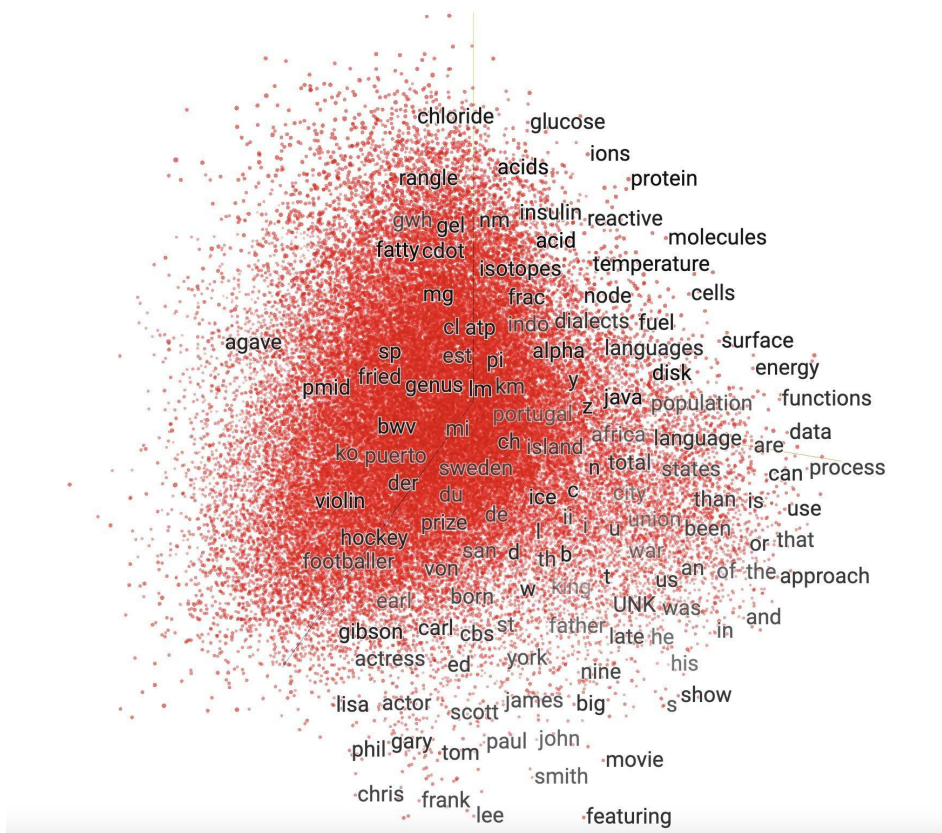


Queen = [0.3, 0.9]
King = [0.5, 0.7]
Woman = [0.3, 0.4]
Man = [0.5, 0.2]

Image from Sutor et al

# Semantic Search

# 02

# What is a Vector Embedding?
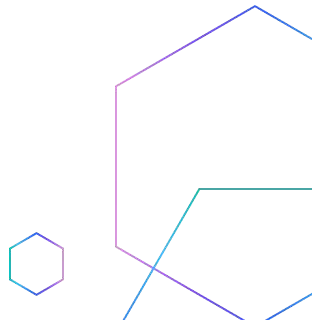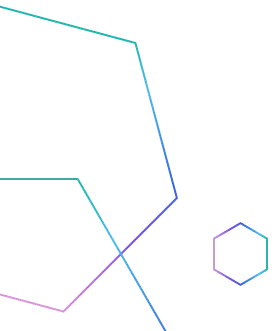
# Vector Embedding

📖 **medium_articles** `LOADED`

🖥 Connection Guide    Actions ⌄

Collection Details    Schema    **Data Preview**    Vector Search

| id | title_vector | title | link |
|---|---|---|---|
| 125 | [0.014838364, -0.017620698, 0.03955149... | The dawn of Dark Mode | https://uxde |
| 195 | [-0.008266705, -0.009836753,... | Scrollsuming – The New Zombie Interaction | https://medi |
| 1464 | [0.036901046, 0.00553058, 0.011379256,... | Make Issue Types Great Again | https://medi |
| 1538 | [0.013065741, 0.011942832, -0.00739964... | Creating an exam archive system with a Data... | https://towa |
| 1623 | [-0.0024157332, -0.007975485,... | Using a Golang pattern to write better... | https://medi |
| 2488 | [0.067513265, 0.015994877,... | Make Your Data Models Into Websites | https://towa |
| 2926 | [-0.009442576, 0.0028793914,... | Create A Machine Learning Model With Goog... | https://towa |
| 3480 | [0.048443407, -0.013659755,... | What If Only Batch Normalization Layers Wer... | https://towa |
| 3573 | [0.02339675, -0.0032612802, 0.01034519... | What Zynn's entrance mean for the North... | https://medi |
| 4218 | [0.054374292, 0.011657661, 0.04338219,... | Vibing Out TensorFlow | https://towa |

# How are these generated?



INPUT LAYER

HIDDEN LAYERS

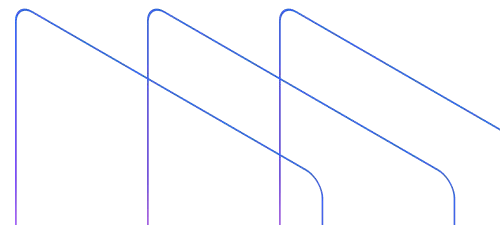OUTPUT LAYER
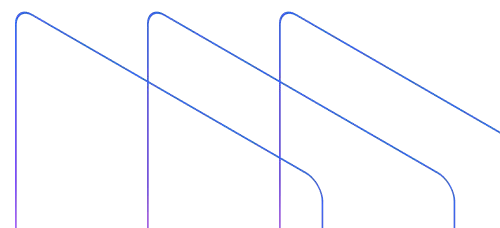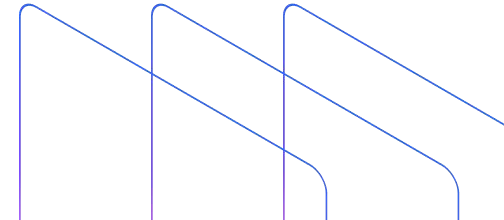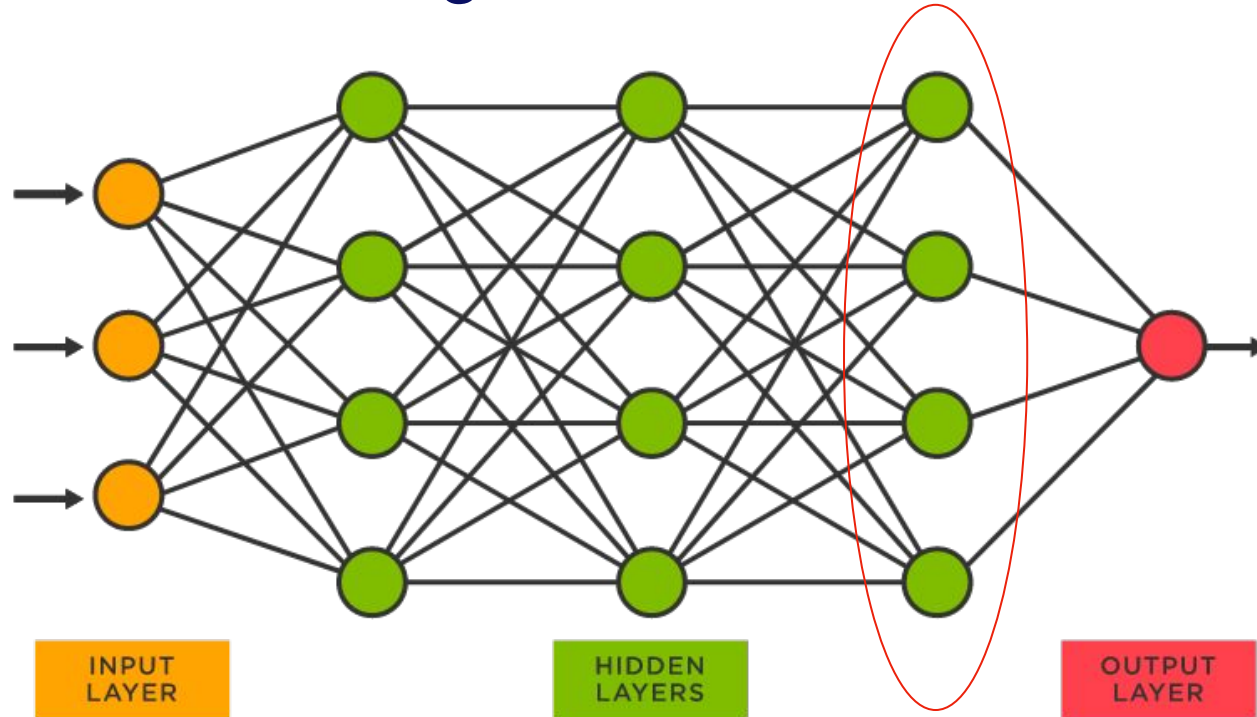
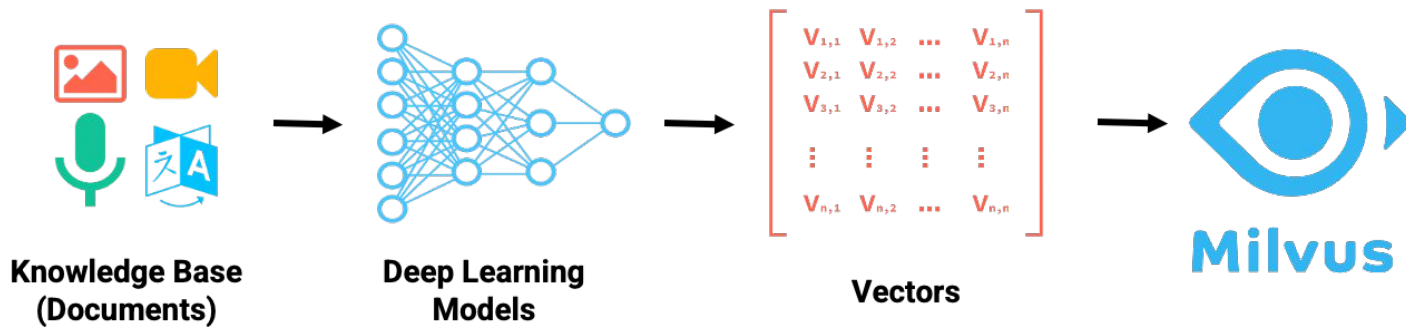# How are these generated?
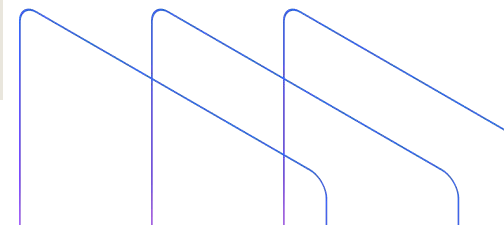
# 03

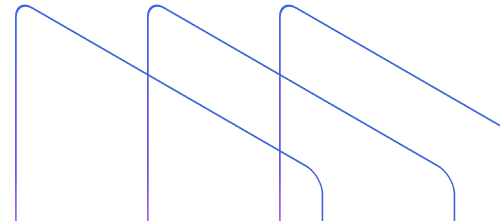# How Can You Do Semantic Text Search?
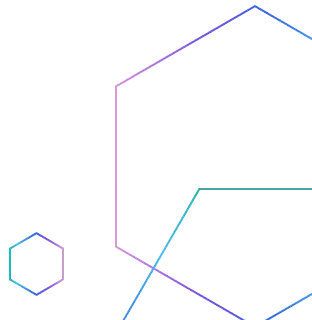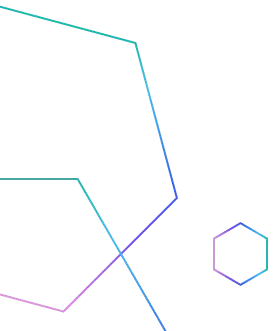
# Put Your Data into a Vector Database

## Steps

1. Download and Import the Data

2. Explore and Clean the Data

3. Spin up the Vector Database

4. Get Embeddings and Populate the Database

5. Query the Vector Database

# THANK YOU FOR LISTENING

github.com/milvus-io/milvus