# txtai – the all-in-one embeddings database

txtai is an all-in-one embeddings database for semantic search, LLM orchestration and language model workflows.

Summary of txtai features:

* *Vector search* with SQL, object storage, topic modeling
* Create *embeddings* for text, documents, audio, images and video
* *Pipelines* powered by language models that run LLM prompts
* *Workflows* to join pipelines together and aggregate business logic
* Build with *Python* or *YAML*. API bindings available for JavaScript, Java, Rust and Go.
* *Run local or scale out with container orchestration*

## Examples

List of example notebooks.

| Notebook | Description |
| --- | --- |
| Introducing txtai | Overview of the functionality provided by txtai |
| Similarity search with images | Embed images and text into the same space for search |
| Build a QA database | Question matching with semantic search |
| Semantic Graphs | Explore topics, data connectivity and run network analysis |

## Install

The easiest way to install is via pip and PyPI

pip install txtai

Python 3.8+ is supported. Using a Python virtual environment is **recommended**.

See the detailed install instructions for more information covering optional dependencies, environment specific prerequisites, installing from source, conda support and how to run with containers.

## Model guide

The following shows a list of suggested models.

| Component | Model(s) |
| --- | --- |
| Embeddings | all-MiniLM-L6-v2 |
|  | E5-base-v2 |
| Image Captions | BLIP |
| Labels - Zero Shot | BART-Large-MNLI |
| Labels - Fixed | Fine-tune with training pipeline |
| Large Language Model (LLM) | Flan T5 XL |
|  | Mistral 7B OpenOrca |
| Summarization | DistilBART |
| Text-to-Speech | ESPnet JETS |
| Transcription | Whisper |
| Translation | OPUS Model Series |