

# Database Systems Implementation

## EvaDB Project1 Proposal

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Application idea: Repository-based question answering

Project Topic: Text-to-Image Transformation App with EvaDB

Nowadays, the repository-based question answering is not limited to responding by text, the diffusion technique enables generating images from textual descriptions. The Github of AI-note<sup>[1]</sup> presents many image generation examples. One simple example is a Twitter-based artist called Tui Casso.

A prior work integrated MindsDB, an open-source AI middleware, and DALL-E, an AI image generation model from OpenAI<sup>[2]</sup>, to build a Twitter chatbot that converts text prompts into images.

In this project, I try to figure out whether EvaDB can implement the same task, or even better than the prior work mentioned above. EvaDB enables some functions about images, such as image search and image classification. These functions are done by EvaDB's built-in support for vision models and vector database systems. The vector database systems may help EvaDB in implementing tasks related to images. In addition, EvaDB also facilitate the usage of OpenAI models. As a result, I think it is possible to integrate EvaDB with OpenAI (DALL-E) to create a text-to-image App. The EvaDB takes the users' prompts and communicates with DALL-E, DALL-E generates the corresponding images and sends back to EvaDB, storing them in the vector database systems. EvaDB performs images classification on the images sent from DALL-E, and then if the users make a request for similar images again, EvaDB's image search function can output the image directly without requiring DALL-E.

### Progress

I have installed EvaDB, but I am still trying to figure out how to use EvaDB's vector database systems and how to make EvaDB communicate with DALL-E (the website of EvaDB seems to only give examples of communicating with ChatGPT).

### Reference

[1]<https://github.com/swyxio/ai-notes.git>

[2][Tutorial: how to add AI image generation to your own app \(mindsdb.com\)](https://mindsdb.com/tutorial/how-to-add-ai-image-generation-to-your-own-app/)

[3] [API Reference - OpenAI API](https://openai.com/api/)