Project NFT Search

Introduction

NFT Search is an AI-driven cross-modal search engine based on semantic understanding. As a fundamental infrastructure for Web3.0, it allows users to perform token-level searches across hundreds of millions of NFTs using just textual descriptions or image prompts. Leveraging this powerful engine, we also offer personalized NFT recommendations and counterfeit NFT detection, enhancing user experience and security in the digital asset space.

Features planned for the Hackathon

Image-text retrieval

Search for target tokens by semantic description of NFTs

- Txt2Img: Cross-modal text search image mode, extract text features input by users and calculate "feature distance" with NFT image features to obtain candidate tokens;
- Txt2Txt: Homomorphic text search document mode, extract user input text features and calculate "feature distance" with NFT metadata features to obtain candidate tokens;
- Max-Prob: Comprehensive mode, integrate Txt2Img and Txt2Txt results to obtain the final result

Image-image search

Upload similar images (images similar to target token or selfies taken on mobile phones)

- Img2Img: Homomorphic image search image mode, extract features of user-input images and calculate "feature distance" with NFT image features to obtain candidate tokens;
- Img2Txt: Cross-modal image search document mode, extract features of user-input images and calculate "feature distance" with NFT metadata featuresto obtain candidate tokens;
- Max-Prob: Comprehensive mode, integrate Img2Img and Img2Txt results to get the final result

Targeted search

Specify the search space for fine-grained retrieval based on the known target token of the project name.
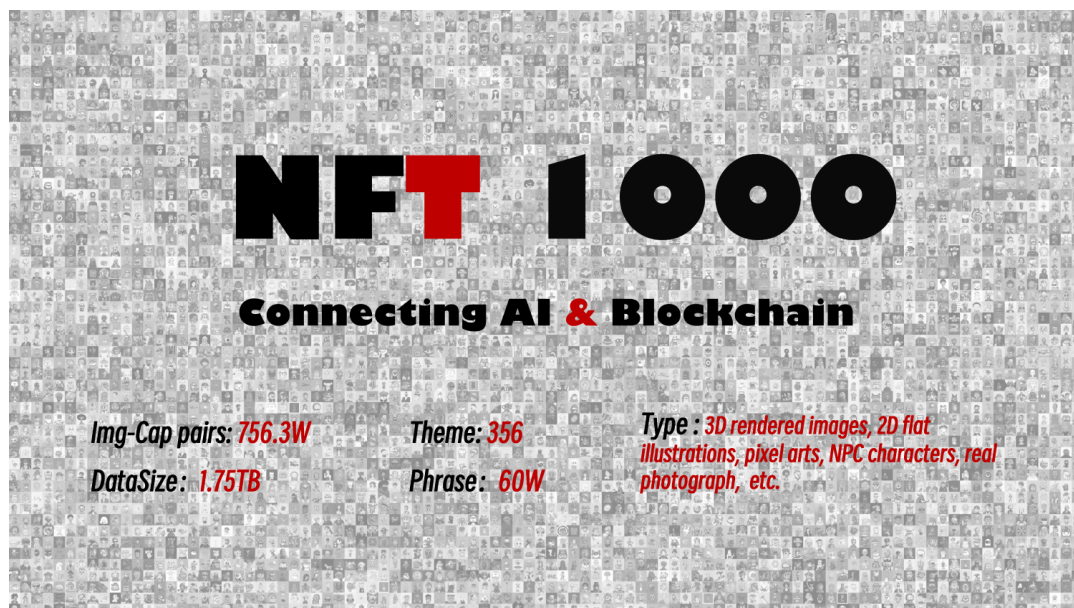
Architect
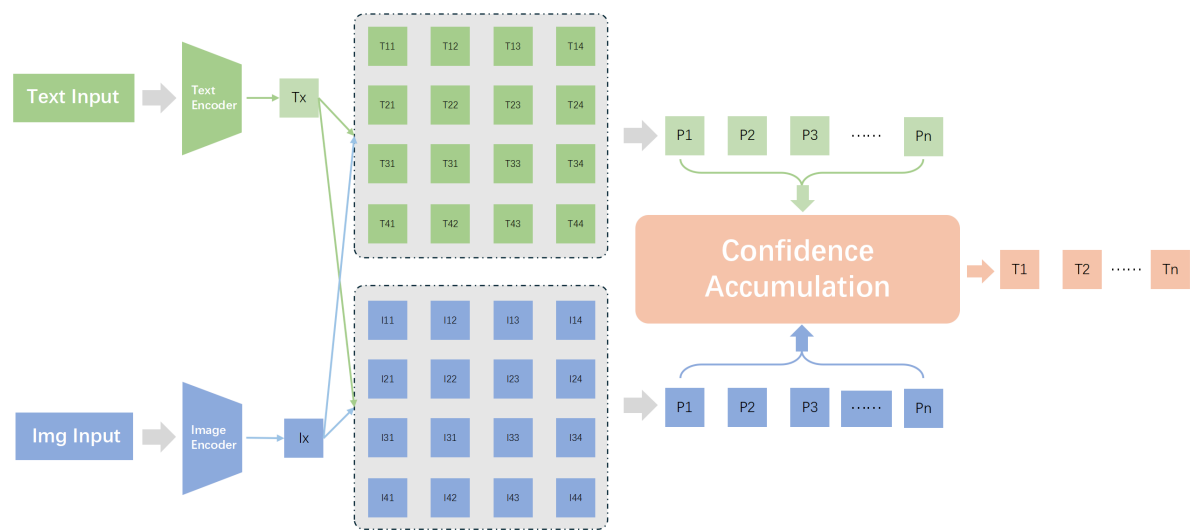
Schedule

- 2023.4 Project Start；
- 2023.11 Dataset preparation completed；

- 2024.7 paper 《**NFT1000: A Cross-Modal Dataset for Non-Fungible Token Retrieva**》 was accepted by ACM Multimedia 2024；

- 2024.10 Cooperation with NFTScan： https://www.nftscan.com/ai-search

- 2024.12 Datasets open to the public；

- 2025.6 RAG based on large language model realizes intelligent recommendation of NFT;

- ……

Team info

- Shuxun Wang： Team leader, model training, algorithm design, backend；

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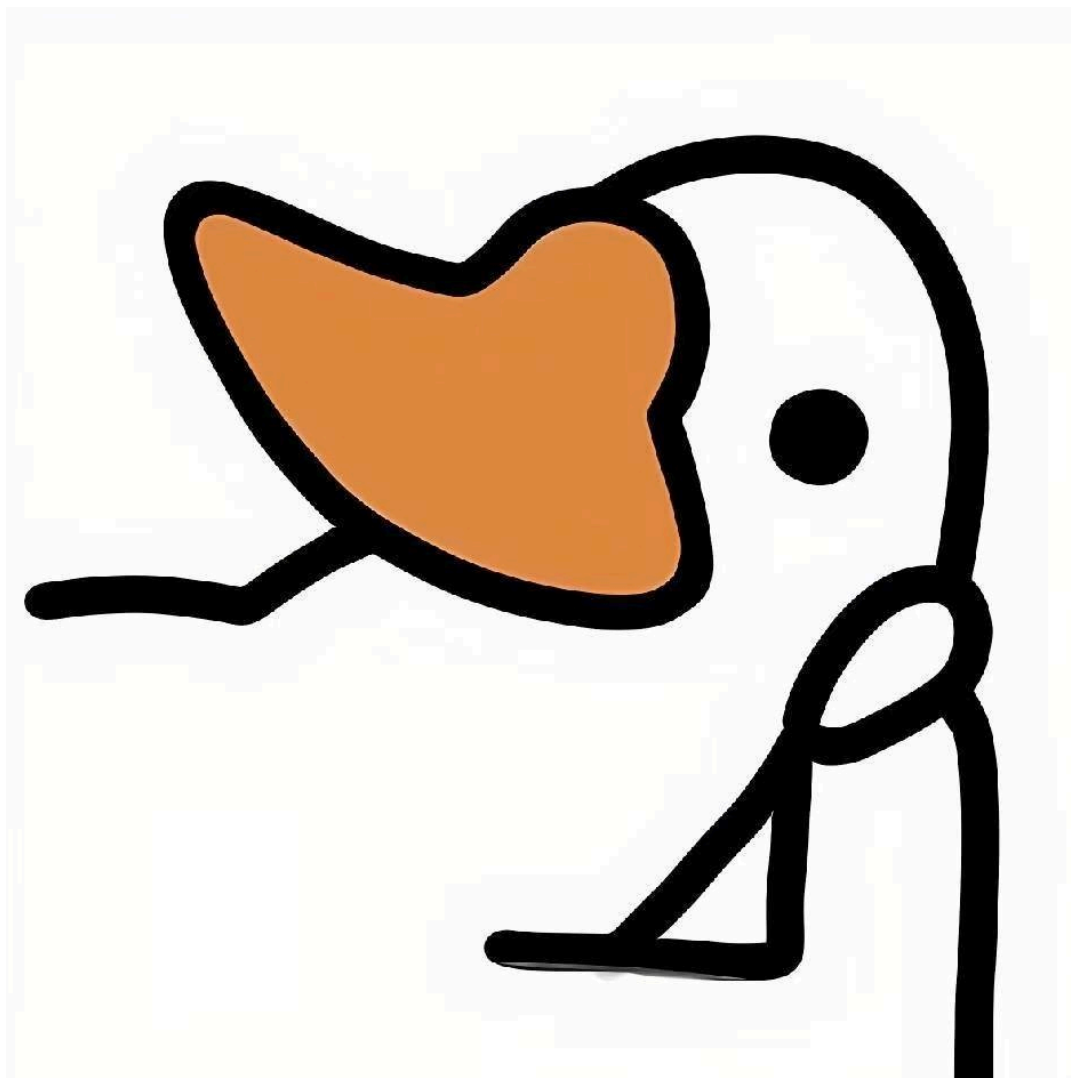
- Eric: Front-end, UI design

Material for Demo

1. Demo Video [https://youtu.be/BmxmYxwuMtM?si=Yn7yowIbonCqCnBo]
2. PPT [https://drive.google.com/file/d/1Xu1kw5oOeSCr51v791iqr7cR-3NrICX4/view?usp=drive_link]