DSP PROJECT

TUNETRACE

Team Members

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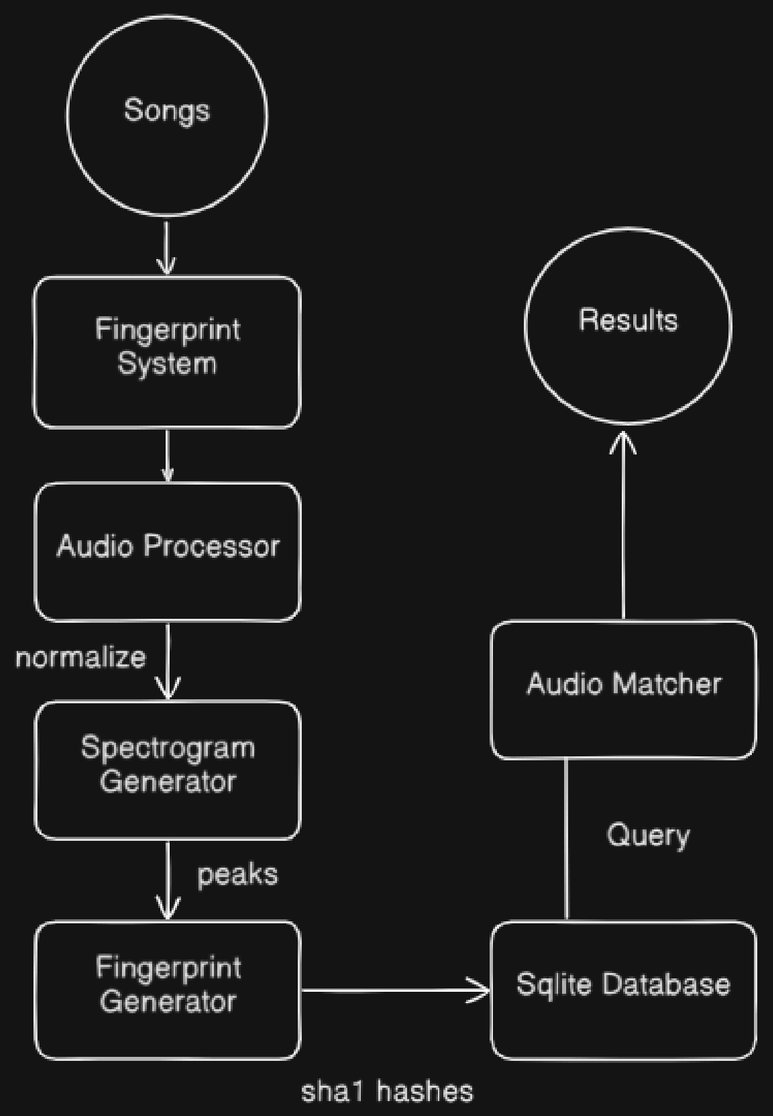
- Muntasir Hossain (ID: 210041265)

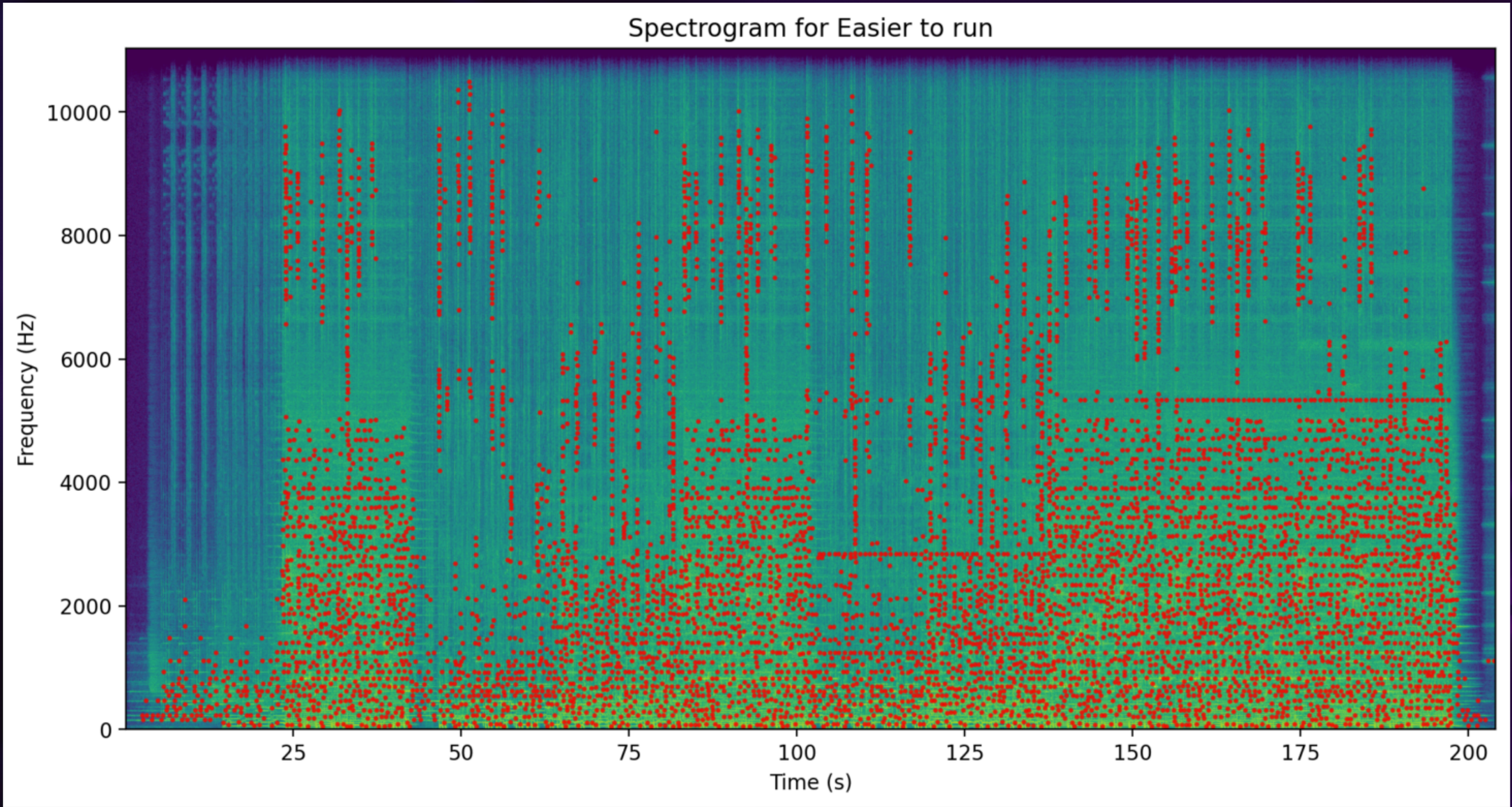
Features ✨

- Audio Fingerprinting: Unique digital signature for each song.
- Spectrogram Generation: Visualize frequency changes over time.
- Database Integration: Store and query song metadata & fingerprints.
- Song Identification: Match songs using fingerprints.

TuneTrace Architecture



eraser


Spectrogram for Easier to run
Frequency (Hz)
10000
8000
6000
4000
2000
0
25
50
75
100
125
150
175
200
Time (s)

Individual Contributions

- Muntasir Hossain (ID: 210041265):

Developed AudioProcessor (audio loading, normalization, windowing), Microphone Recorder for Audio Identify

- Kazi Shakkhar Rahman (ID: 210041240):

Spectrogram generation, peak detection, SQLite DB, Streamlit UI for song upload & playback

- Rafid Ahmed (ID: 210041232):

Fingerprinting, Audio Matching, Streamlit UI for audio Identify

THANK YOU

For Your Attention