HARMONIC TENSION VISUALIZER
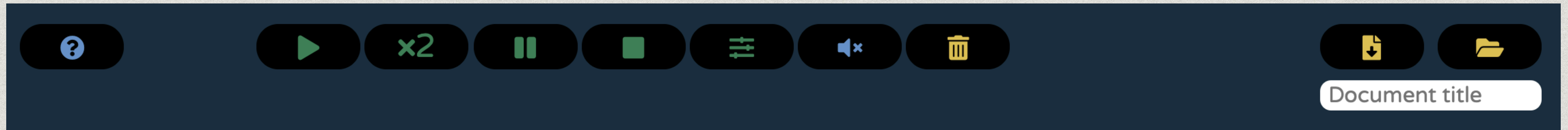
Francesco Zumerle - Hakim El Achak - Elisa Castelli - Simone Lucchiari

PIANO ROLL

- Input chord progression
- Automatic selection
- File upload
- Dynamic scrolling

TOOLBAR

- Info
- Progression reproduction
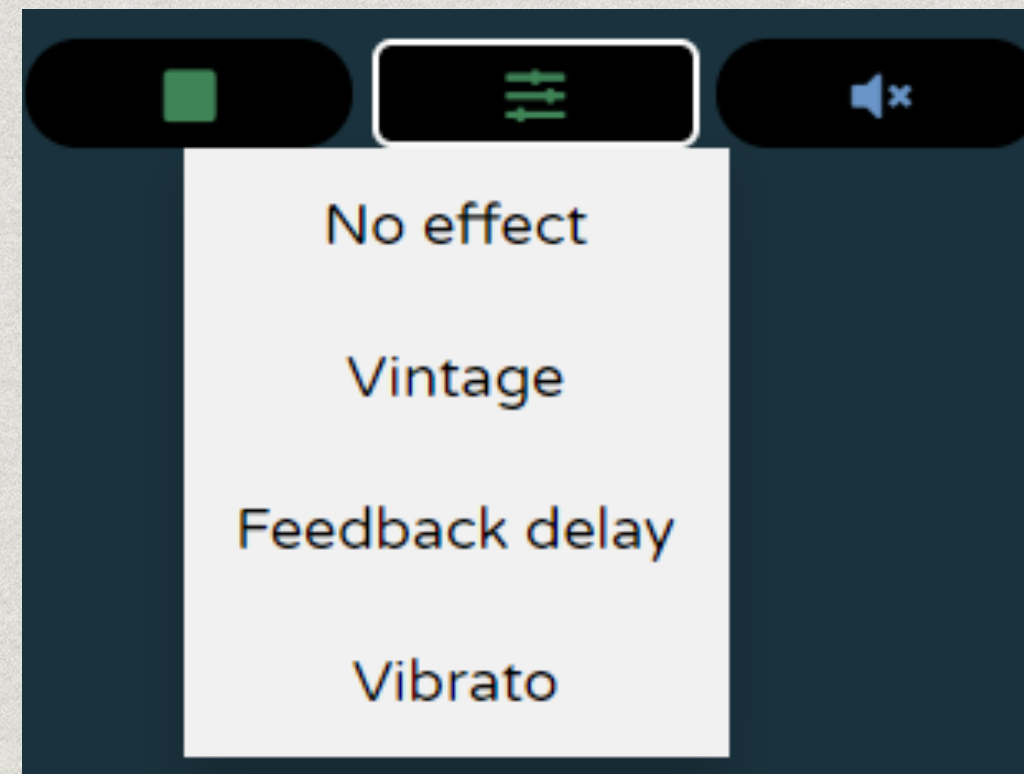- Volume
- Reset
- Download/Upload

TONE.SAMPLER & TONE.JS

- Multiple notes played simultaneously
- "Sampler object" and binding
- Output connection
- TriggerAttackRelease

Effects

-Vintage Distortion
-Vibrato
-Feedback delay

No effect

Vintage

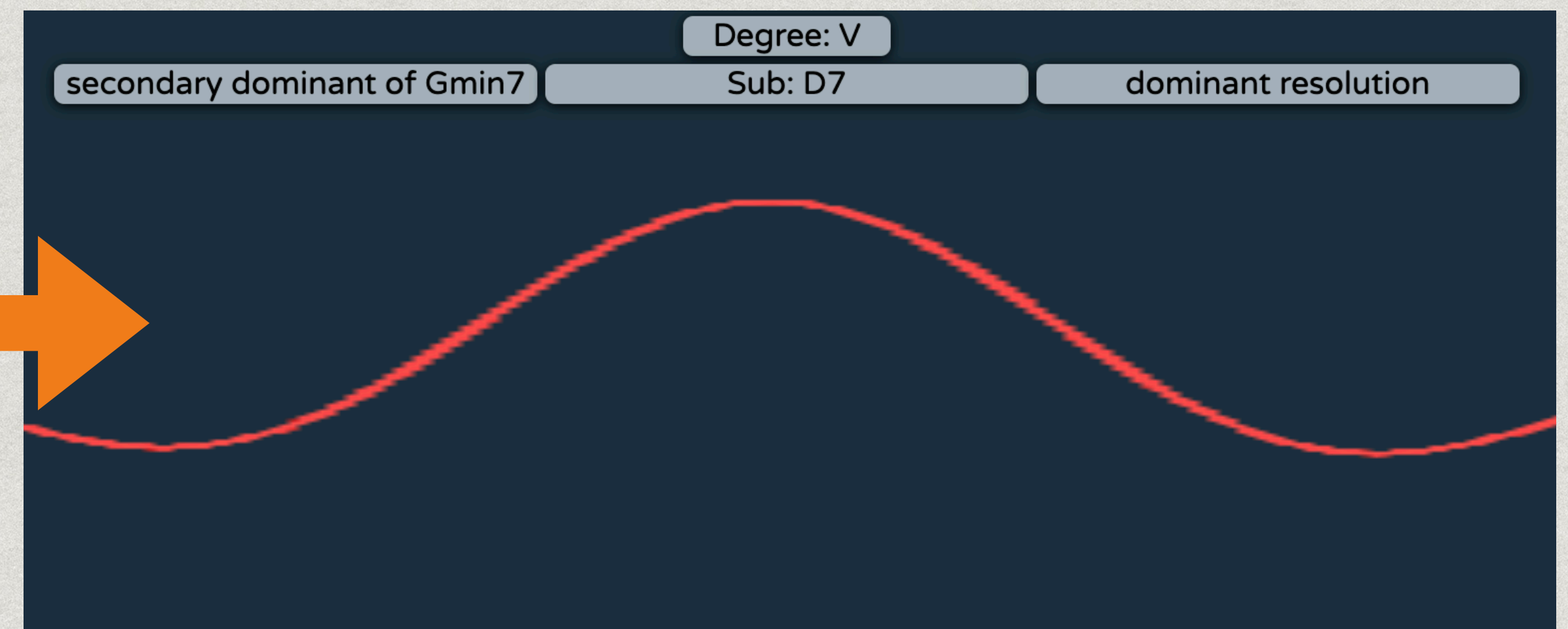Feedback delay

Vibrato

```
let sampler = new Tone.Sampler({
    "C2": "./piano/C2.mp3",
    "C#2": "./piano/Cs2.mp3",
    "D2": "./piano/D2.mp3",
    "D#2": "./piano/Ds2.mp3",
    "E2": "./piano/E2.mp3",
    "F2": "./piano/F2.mp3",
    "F#2": "./piano/Fs2.mp3",
    "G2": "./piano/G2.mp3",
    "G#2": "./piano/Gs2.mp3",
    "A2": "./piano/A2.mp3",
    "A#2": "./piano/As2.mp3",
    "B2": "./piano/B2.mp3",
    "C3": "./piano/C3.mp3",
}).set({
    "volume": Volume,
}).toMaster();
```

A#2   Min7   Major
A2
G#2
G2
F#2
F2
E2
D#2
D2   Dmin7
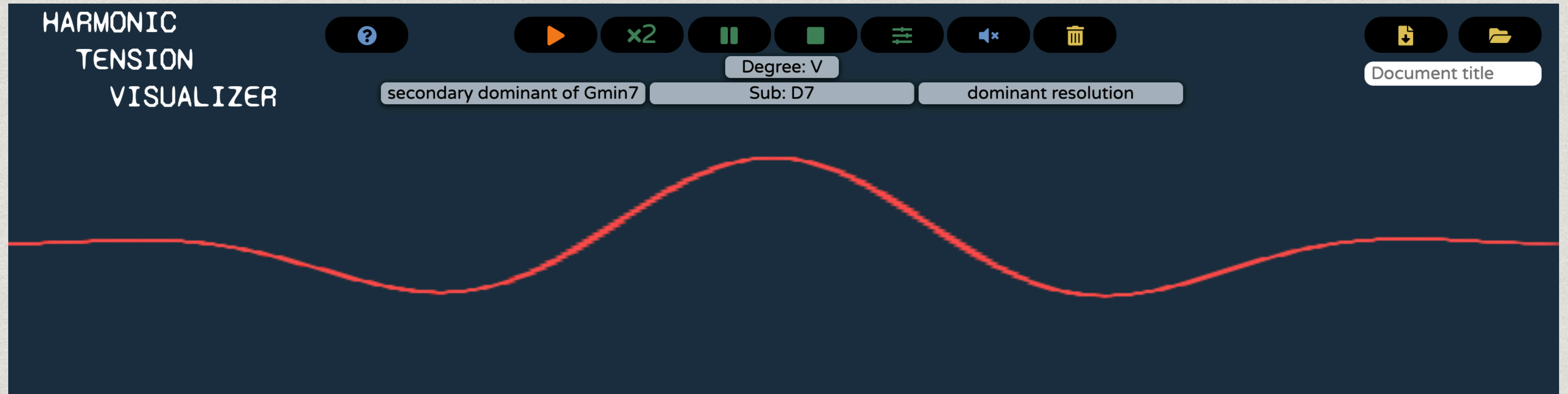C#2

HARMONIC ANALYSIS

harmonicAnalysis.js

- Step 1: Estimate possible keys

- Step 2: Analyze "wrong" chords

- Step 3: Assign tension, find patterns

GRAPHIC REPRESENTATION

- Canvas
- Wave construction
- Degree, pattern and substitution info

VIDEO DEMO:

https://youtu.be/JRw4pi4h1TY

WEB SITE:

http://harmonytensionvisualizer.surge.sh