Upload file flow

User uploads audio file ← input.audio

Is it a valid audio file? (`ffprobe`) — No → Quit, log error

Yes ↓

Is it a 16 bit mono wav? (`ffprobe`) — No → Convert to 16 bit mono wav (`ffmpeg`) → converted.wav

Run selected algorithm (`windDet/distDet`) → report.json — Graphs, audio region highlights

Delete converted.wav

Generate peaks (`audiowaveform`) → peaks.dat — Preview audio player data

Is the audio in a compressed format? (`ffprobe`) — No → Generate compressed audio for playback (`ffmpeg`) → input.mp3 ← Used in browser preview

input.ogg ← Used in browser preview

Yes ↓

Email user, report complete

Report page: audio output flow

User requests processed file from report page

Sensitivity threshold? — float → Time data array → report.json

Output quality? — Compressed → input.mp3

Output quality? — Source → input.audio

Output type? — Muted sections → muted.mp3 / muted.audio

Output type? — Regions → region0.mp3 region1.mp3 ... / region0.audio region1.audio region2.audio ... regionN.audio → regions.zip

Generate output (`ffmpeg`)