

Game Design and Development

Wave Voyager – Prototype 1

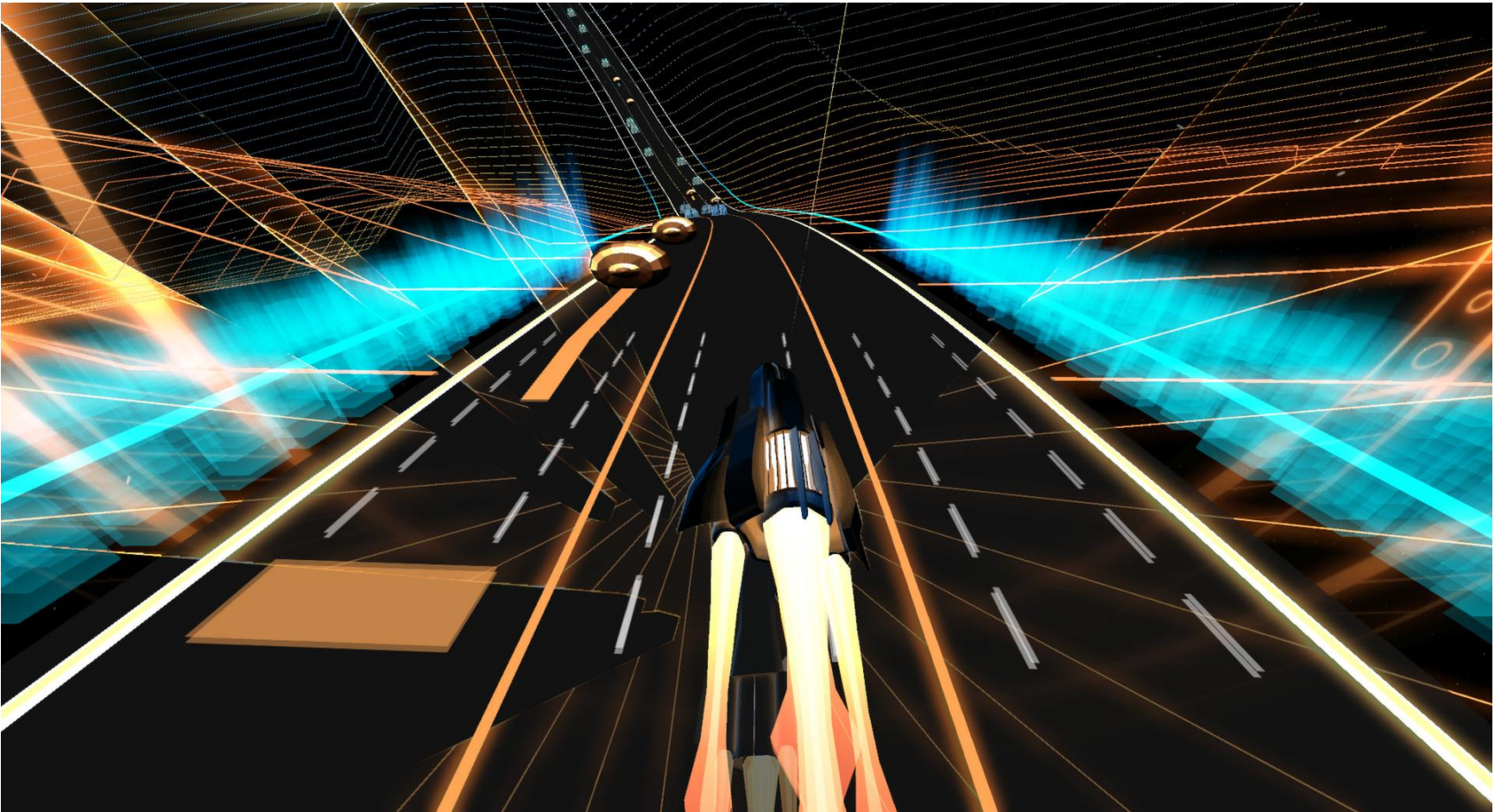
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Inspiration

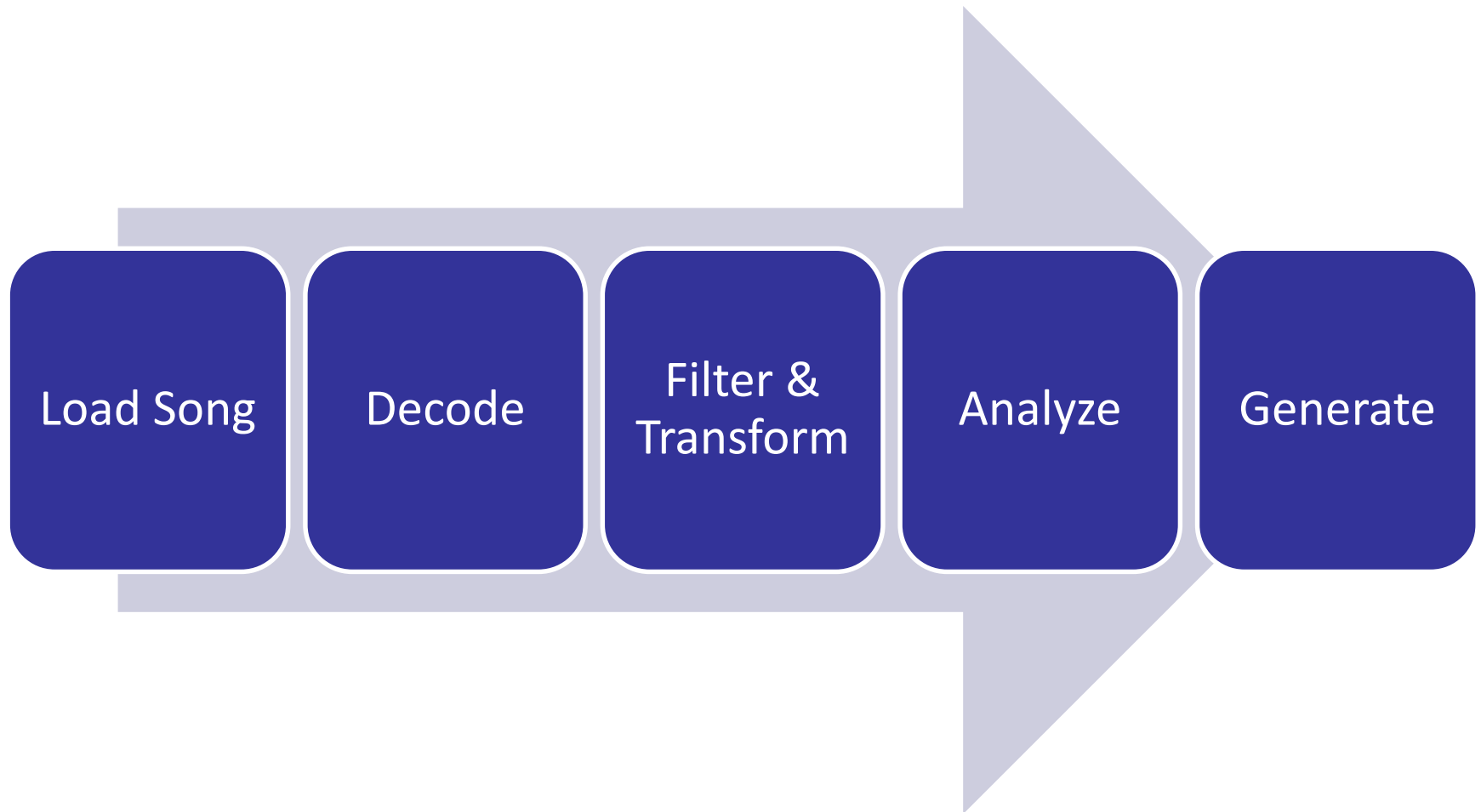


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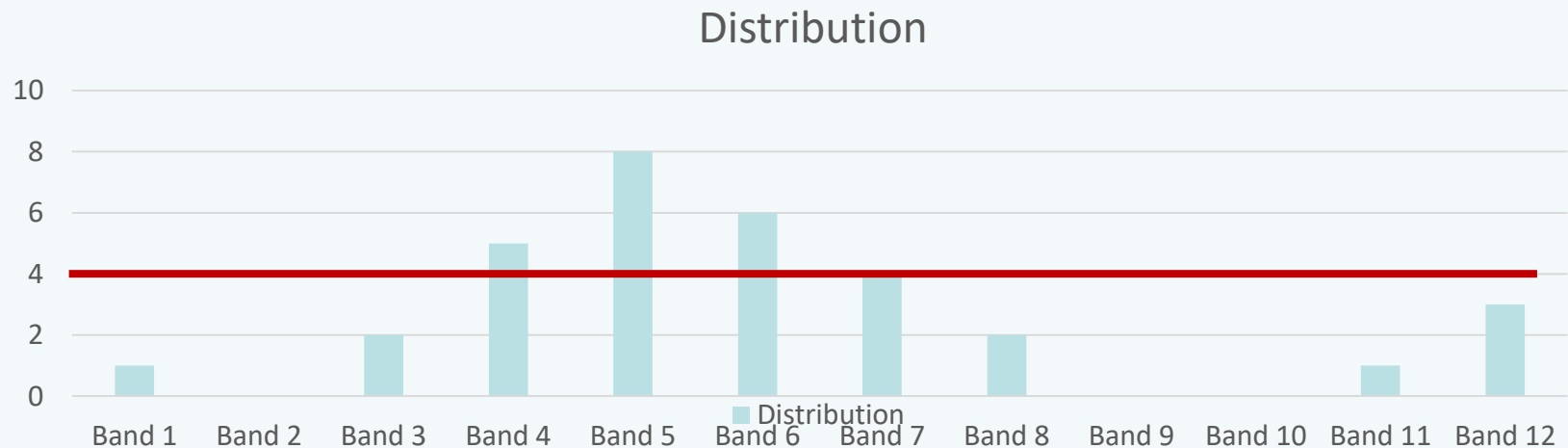
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Level Generation – Basic Idea



Level Generation – Approach & Problems

- Idea: Detect variations in sound energy
 - Accumulate samples
 - Get frequency spectrum
 - Divide into subbands
 - Compare subbands; detect beats



Level Generation – Approach & Problems

- Which sampling method?
- Which sampling rate?
- How much subbands?
- Which filtering method?
- Use existing API/build from scratch?

Level Generation – Possible Solutions & APIs

- Fast Fourier Transformation → Frequency distribution.
- Spectral flux → More reliable beat-detection.
- Comb Filter → Determine ~BPM.
- APIs:
 - FMOD
 - NAudio
 - BASS

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Demo

DEMO

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