PitchPerfectMemory

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Perfect vs. Relative Pitch

- We generally can’t explicitly name a given pitch
- True *Perfect Pitch* is very rare, and is commonly thought to be innate, not learned
- Most people CAN determine the *relative* pitch from one note to another
- With training, people can develop a very accurate sense of relative pitch

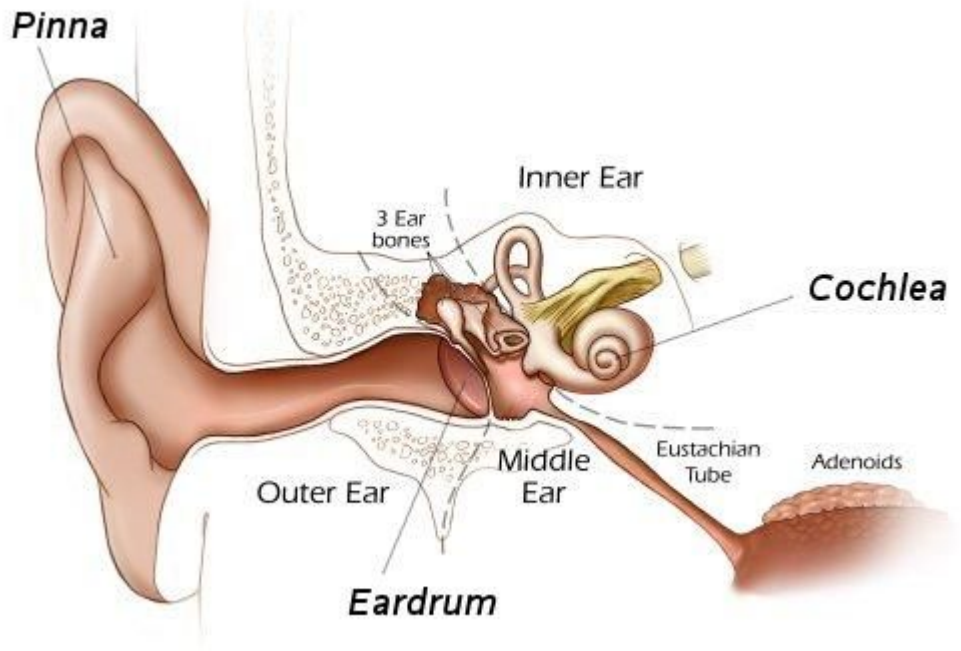
The Goal

- Listen and encode incoming audio (sine wave)
- Store the audio in memory
- Determine the relative pitch (higher/lower) of a second audio signal

Possible Extensions:

- Extend to more complex tones (different timbres)
- Remember melodies
- Learn precise intervals

Modeling

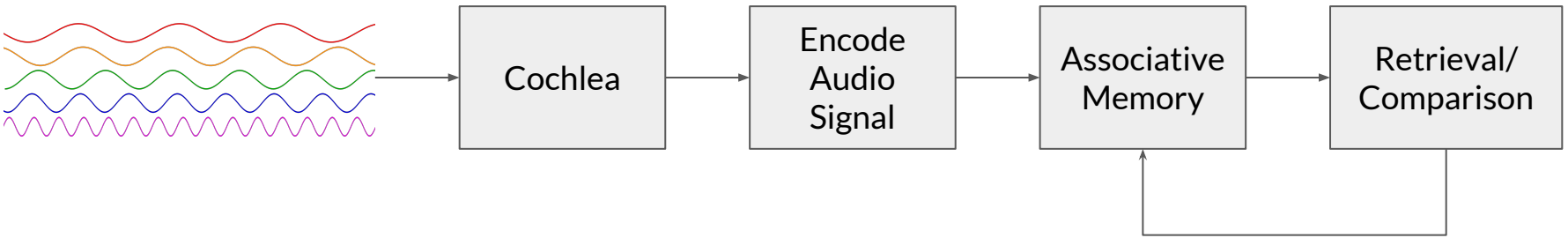


Nengo

BrianHears

auditory_periphary

Implementation



Progress

```
import numpy as np
import nengo
from tbekolay import auditory_periphery
```