Phase 3 Mid-term Meeting
OpenSource Research

The Sound of AI

December 19th 2020

Meeting guidelines

- Meeting will be recorded

- Please keep mic muted

- Write questions / comments in the chat

- Q&A sessions at the end

Overview

1. Task review - Phase 3 Week 1

2. Refined selected topic

3. Research Groups

4. Coordinators announcement

5. Workflow to join RGs

6. Tasks - Phase 3 Week 2

7. Next contributors activities

1- Task review - Phase 3 Week 1

What is Phase 3 about?

Groups formation

Tasks

- Refine selected research topic

- Break down research topic into subtopics

- Appoint Research Coordinators + CoCos

- Familiarise with selected research topic [ALL CONTRIBUTORS]

Tasks

- ~~Refine selected research topic~~

- ~~Break down research topic into subtopics~~

- ~~Appoint Research Coordinators + CoCos~~

- ~~Familiarise with selected research topic [ALL CONTRIBUTORS]~~

2- Refined selected topic

What will we research / build?

Performing system for musicians, which generates sounds using a neural synthesizer controlled by voice / sliders.

How does the system work?

Vocal command

How does the system work?

Vocal command
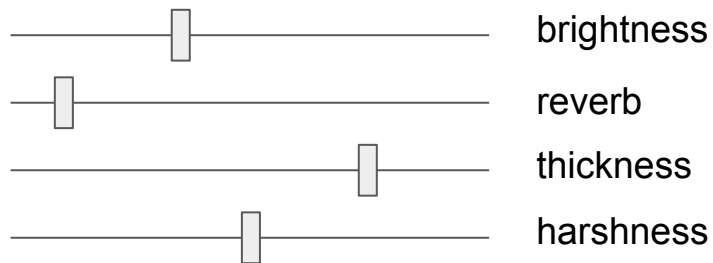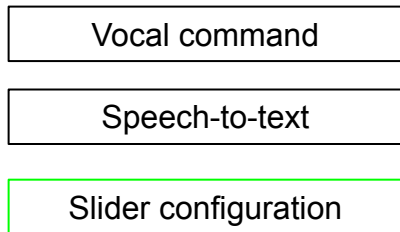
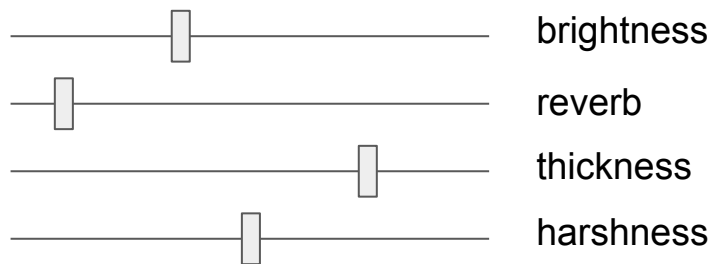Speech-to-text

How does the system work?

Vocal command

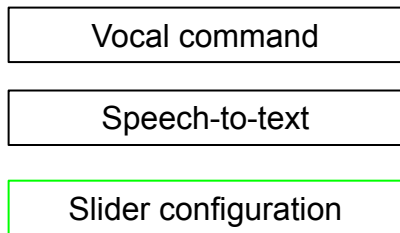Speech-to-text

Slider configuration

How does the system work?

Vocal command

Speech-to-text

Slider configuration

brightness

reverb

thickness

harshness

How does the system work?

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- Semantic descriptors
- Independent

How does the system work?

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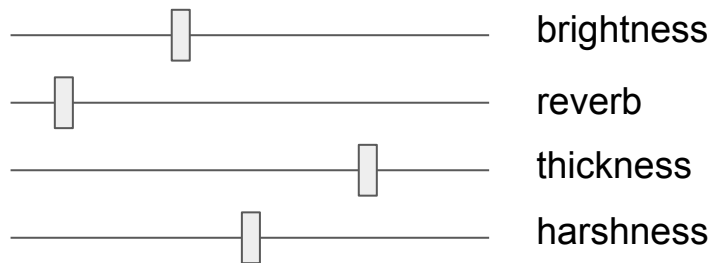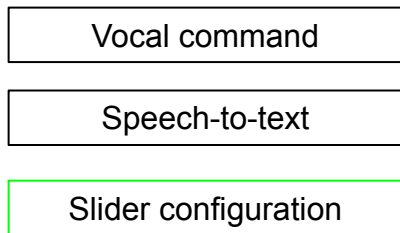
- Semantic descriptors
- Independent
- Learn mapping from sound to sliders
- Learn mapping from text to sound / sliders

How does the system work?

Vocal command

Speech-to-text

Slider configuration

Tweak sliders

How does the system work?

Vocal command

Speech-to-text

Slider configuration

Tweak sliders

Generation

How does the system work?

Vocal command

Speech-to-text

Slider configuration

Tweak sliders

Generation

- Use NN model
- Slider configuration as input
- Generate one-shot sound

How does the system work?

Vocal command

Speech-to-text

Slider configuration

Tweak sliders

Generation

Sampler

- From single sound to instrument
- Instrument to playback sounds generated by neural synthesiser
- Pitch shift a single generated sound

How does the system work?

Vocal command

Speech-to-text

Slider configuration

Tweak sliders

Generation

Sampler

Looper

How does the system work?

How does the system work?

Vocal command

Speech-to-text

Slider configuration

Tweak sliders

Generation

Sampler

Looper

Semi real-time

3- Research groups

Research groups

- Speech to Text (STT)

Vocal command

Speech-to-text

Slider configuration

Tweak sliders

Generation

Sampler

Looper

Research groups

- Speech to Text (STT)

- Text to Sound (TTS)

| Vocal command |
| Speech-to-text |
| Slider configuration |
| Tweak sliders |
| Generation |
| Sampler |
| Looper |

Research groups

- Speech to Text (STT)

- Text to Sound (TTS)

- Sound Generation (SG)

Vocal command

Speech-to-text

Slider configuration

Tweak sliders

Generation

Sampler

Looper

Research groups

- Speech to Text (STT)

- Text to Sound (TTS)

- Sound Generation (SG)

- Production (PR)

| Vocal command |
| Speech-to-text |
| Slider configuration |
| Tweak sliders |
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| Looper |

Research groups

- Speech to Text (STT)

- Text to Sound (TTS)

- Sound Generation (SG)

- Production (PR)

- Music

Vocal command

Speech-to-text

Slider configuration

Tweak sliders

Generation

Sampler

Looper

Research groups

- Speech to Text (STT)
- Text to Sound (TTS)
- Sound Generation (SG)
- Production (PR)
- Music
- Evaluation (Eval)

Vocal command

Speech-to-text

Slider configuration

Tweak sliders

Generation

Sampler

Looper

Research groups

- Speech to Text (STT)

- Text to Sound (TTS)

- Sound Generation (SG)

- Production (PR)

- Music

- Evaluation (Eval)

- Dataset (Data)

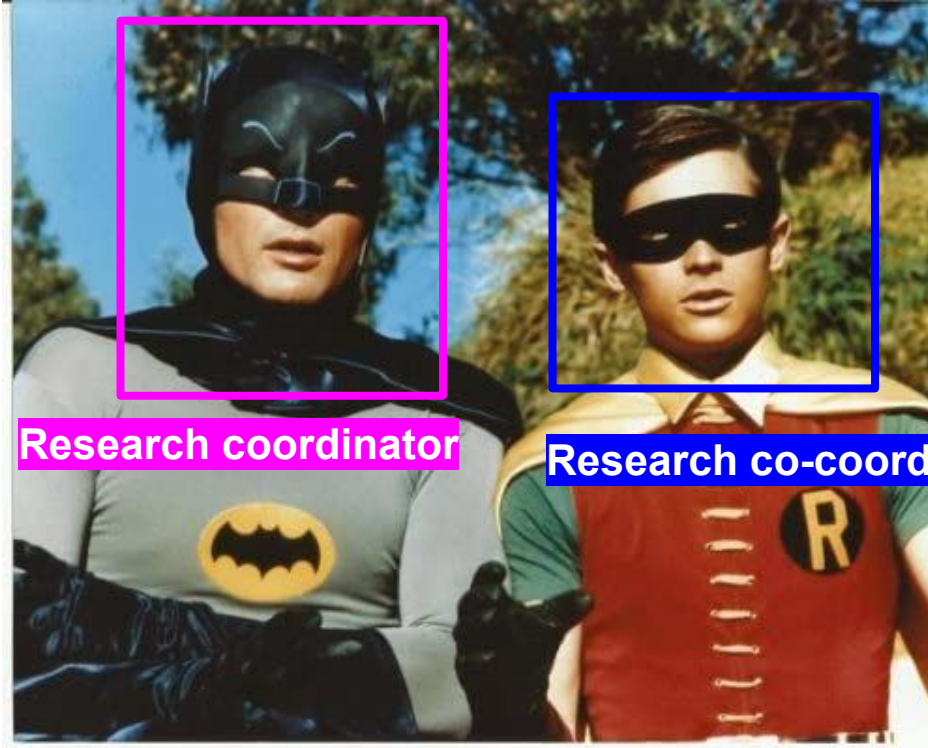| Vocal command |
| Speech-to-text |
| Slider configuration |
| Tweak sliders |
| Generation |
| Sampler |
| Looper |

Research groups

[Learn more](#)

4- Coordinators announcement

Appointed coordinators

Research Group	Research Coordinator	CoCo
Speech To Text	Tibor Kiss	Manan Shah
Text to Sound	Erik Ringaby	Manoj Kolpe
Sound Generation	Amit Yadav	Daniel Jones
Production	Vyron Vasileiadis	Jesse Hill
Music	Jacob Richter	Fajilatun Nahar
Evaluation	Chris Kang	?
Dataset	Adam Sabra	Umang Keshri

5- Workflow to join Research Groups

Goals

- Let all contributors join a RG, based on their preference

- Each contributor joins 1 and only 1 RG

Contributors workflow

1. Learn about research groups / coordinators

Contributors workflow

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2. Cast 3 preferences with "y" symbol in the "research group votes" tab of [Research Groups spreadsheet](#)

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   ○ If your name isn't in the list, add yourself to the [Contributors](#) spreadsheet
   ○ Let a PM know - he will add you to the RG spreadsheet

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3. Wait for RCs to assign you to 1 group

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3. Wait for RCs to assign you to 1 group

4. Announcement of RGs in Phase 4 Kickstart Meeting (Sun 27th of Dec)

Timeline

- Attend *Parallel RGs Presentations on Discord* (Sun 10th of Dec)

- Preference casting starts Monday 21st of Dec

- Preference casting ends Thursday 24th of Dec

Research coordinators workflow

- [Select contributors](#) with dropdown menu

- Copy the selected contributor name + Slack in the "research groups" tab

- Interact autonomously with other coordinators to agree on contributors

  - DM a RC on Slack
  - Message on #coordinators-osr
  - Hop on a call on #coordinators Discord voice channel

RG formation heuristics

- Max 6 non-coordinator contributors per RG (grand total of 8 people per group)

- Groups with balanced expertise

Research coordinators timeline

- Present at *Parallel RGs Presentations on Discord* (Sun 20th)

- Select contributors (Mon 21st - Thu 24th)

- If adjustments are necessary, coordinators + PM meeting on Sat 26th

6- Tasks for Phase 3 (week 2)

Tasks for all contributors

- Attend *Parallel RGs Presentation on Discord* (Sun 20th)

- Learn about RGs + refined selected topic ([read this doc!](#))

- [Cast preference](#) of 3 RGs you'd like to join

- Dig deeper into AI Music Creativity research, tools, and datasets ([read this doc!](#))

Tasks for coordinators

- Select contributors to form your RG

- Potential: Attend *PM + Coordinators meeting* (Sat 26th)

7- Next contributors activities

What's next for all contributors?

Parallel RGs / coordinators presentations

Sunday 20th Dec @ 2pm CET

Parallel RGs presentation on Discord: Programme

- 20' instructions on GoogleMeet

- 1 hr parallel presentations on Discord

Parallel RGs presentation on Discord

- Decentralised / autonomous presentations

- 1 RC per voice channel

- RC will present themselves + RG

- Contributors ask questions

Parallel RGs presentation on Discord: Goals

- Contributors understand what to expect by joining a RG

- Contributors understand what RGs they'd like to join

- RCs can attract contributors to their RG!

What's next for all contributors?

Phase 4 Kickstart Meeting

Sunday 27th Dec @ 2pm CET