2021 GOOGLE SUMMER OF CODE | GFOSS | LABEL BUDDY

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UI/UX consulting: **Lina Aggelopoulou**, **Jen Anastasopoulou**

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ABOUT GOOGLE SUMMER OF CODE (GSOC)

▸ Global program for supporting open-source proposals

▸ Students who are chosen get paid

▸ 2005 – present

▸ Mentors are volunteers helping students throughout the whole program

▸ Past projects: https://summerofcode.withgoogle.com/projects/

PROPOSAL - GSOC - 2021

▸ Pantelis Vikatos and Markos Gogoulos (mentors) submitted their idea for creating a web audio first **annotation tool** which provides the multi-user feature

▸ It got accepted by the Greek Open Technologies Alliance (GFOSS)

▸ I sent my proposal for implementing their idea

▸ I got chosen and we created Label Buddy during GSsoC

WHAT IS AN ANNOTATION TOOL

▸ It is a tool which helps people add information to audio, text, images etc. This process is called annotation.

▸ The output of an annotation process (JSON) can be used as a dataset for training Machine Learning models and other tasks

▸ The annotation process is tedious and time consuming

▸ Thus, an annotation too must be user friendly and simple
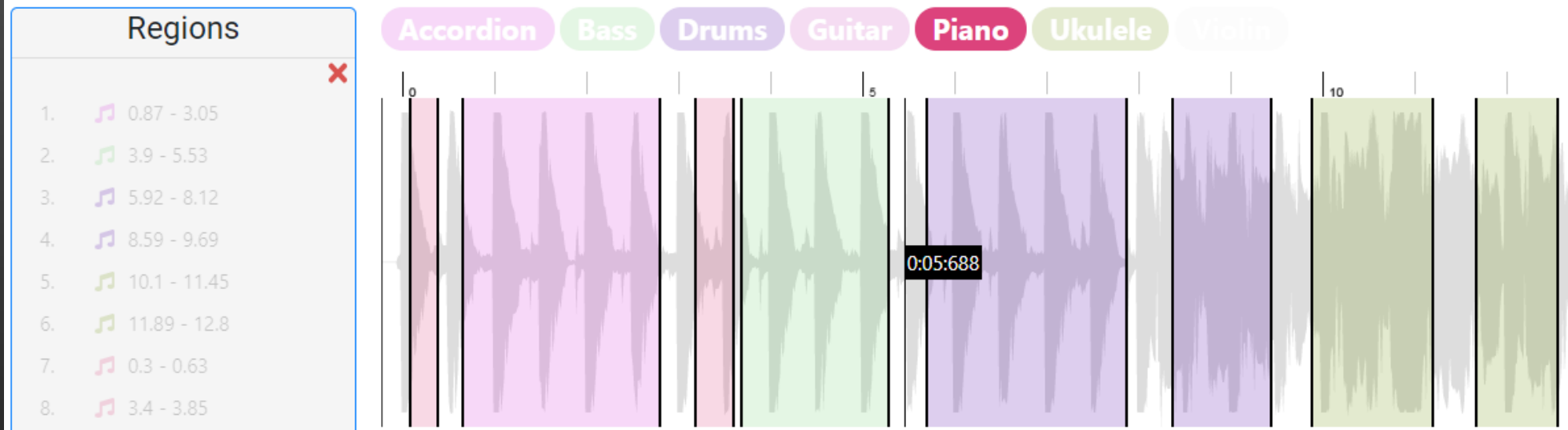
ANNOTATIONS EXAMPLES

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WHY LABEL BUDDY

- There is a variety of annotation tools available

- Most of them lack the multi-user feature (multiple users annotating a single project simultaneously) and does not have a role distinction

- Label Buddy aims to fill these gaps

LABEL BUDDY TECH-STACK

- ▸ Django (Python-based, Backend)

- ▸ HTML, JavaScript, Bootstrap (Frontend)

- ▸ JS Wavesurfer library for waveforms: https://wavesurfer-js.org/

LABEL BUDDY

Label buddy is a web audio annotation tool and consists of the following roles:

- ▶ Managers
- ▶ Annotators
- ▶ Reviewers

Each role will be explained below.

MANAGERS CAN:

- Create/edit projects (choose annotators and reviewers for the project created)

- Upload audio files for each project (tasks)

- List all tasks and see which of them are annotated and by who

- Delete tasks

- Export annotated data (JSON or CSV format)

ANNOTATORS CAN:

- Annotate assigned uploaded audio files (tasks)
- Update already completed annotations
- See comments written by reviewers for their annotations

REVIEWERS CAN:

- List all annotation for a specific task and Accept/Reject annotations completed by annotators providing a comment

REPOSITORY SCREENSHOTS

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UI/UX IMPROVEMENTS SCREENSHOTS

Projects ⑦

⊕ Create

Project Title ↓	Date of Creation	Task permissions ⑦	Number of tasks	Annotations	Number of labels	Annotator	Reviewer	Managers	Options
⑦ Project 1	Fri 22 Oct 2021	✅ Tasks unassigned	10	5	5	✅ Can annotate	✅ Can review	3 Managers	✏ / 🗑
⑦ Project 2	Mon 20 Sep 2021	✅ Tasks unassigned	1	0	2	✅ Can annotate	❗ Cannot review	johnsina304@yahoo.com	✏ / 🗑
⑦ Project 3	Mon 20 Sep 2021	❗ Tasks assigned	0	0	0	❗ Cannot annotate	❗ Cannot review	johnsina304@yahoo.com	✏ / 🗑
⑦ Project 4	Mon 20 Sep 2021	❗ Tasks assigned	0	0	0	❗ Cannot annotate	❗ Cannot review	johnsina304@yahoo.com	✏ / 🗑
⑦ Project 5	Mon 20 Sep 2021	❗ Tasks assigned	0	0	0	❗ Cannot annotate	❗ Cannot review	johnsina304@yahoo.com	✏ / 🗑
⑦ Project 6	Mon 20 Sep 2021	❗ Tasks assigned	0	0	0	❗ Cannot annotate	❗ Cannot review	johnsina304@yahoo.com	✏ / 🗑
⑦ Project 7	Mon 20 Sep 2021	❗ Tasks assigned	0	0	0	❗ Cannot annotate	❗ Cannot review	johnsina304@yahoo.com	✏ / 🗑
⑦ Project 8	Mon 20 Sep 2021	❗ Tasks assigned	0	0	0	❗ Cannot annotate	❗ Cannot review	johnsina304@yahoo.com	✏ / 🗑

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LABELBUDDY

🏠 / Project 1

Project 1 ❓

🔽 Filters

☁ Import... 📤 Export

# ID	Task Title ↓	Annotations completed	Annotated by	Audio file	Status	Review status	Annotated by you	Options	🗑
1	Track8.mp3	3	3 Annotators	▶ 0:00 / 0:48 🔊 ⋮	✅ Annotated	❗ Unreviewed	✅ Annotated by you	✏ / 💬	❌
2	Track9.mp3	1	user2@yahoo.com	▶ 0:00 / 0:48 🔊 ⋮	✅ Annotated	❗ Unreviewed	❗ Not annotated by you	✏ / 💬	❌
3	Track1.mp3	0	-	▶ 0:00 / 0:48 🔊 ⋮	❗ Not annotated	❗ Unreviewed	❗ Not annotated by you	✏ / 💬	❌
4	Track10.mp3	0	-	▶ 0:00 / 0:22 🔊 ⋮	❗ Not annotated	❗ Unreviewed	❗ Not annotated by you	✏ / 💬	❌
5	Track3.mp3	1	johnsina304@yahoo.com	▶ 0:00 / 0:48 🔊 ⋮	✅ Annotated	❗ Unreviewed	✅ Annotated by you	✏ / 💬	❌
6	Track5.mp3	0	-	▶ 0:00 / 0:48 🔊 ⋮	❗ Not annotated	❗ Unreviewed	❗ Not annotated by you	✏ / 💬	❌
7	Track6.mp3	0	-	▶ 0:00 / 0:22 🔊 ⋮	❗ Not annotated	❗ Unreviewed	❗ Not annotated by you	✏ / 💬	❌
8	Track2.mp3	0	-	▶ 0:00 / 0:22 🔊 ⋮	❗ Not annotated	❗ Unreviewed	❗ Not annotated by you	✏ / 💬	❌

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Export data ✕

Export data in order to use it as a dataset. The file exported contains all annotations completed for the selected project.

JSON
🔘 List of items in raw JSON format stored in one JSON file. Use to export both the data and the annotations for a dataset.

CSV
⚪ Results are stored as comma-separated values with the column names specified.

☐ Export **only** approved annotations

Export

Import data ✕

Please upload a file.

Accepted formats: **.wav**, **.mp3** and **.mp4**.

Optimally you can upload a **.zip** file containing of accepted format files. Any other formats will be ignored.

Choose File | No file chosen

Upload

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LABEL BUDDY DEMO

▶ Video: https://www.youtube.com/watch?v=ikPrWbs9MWw
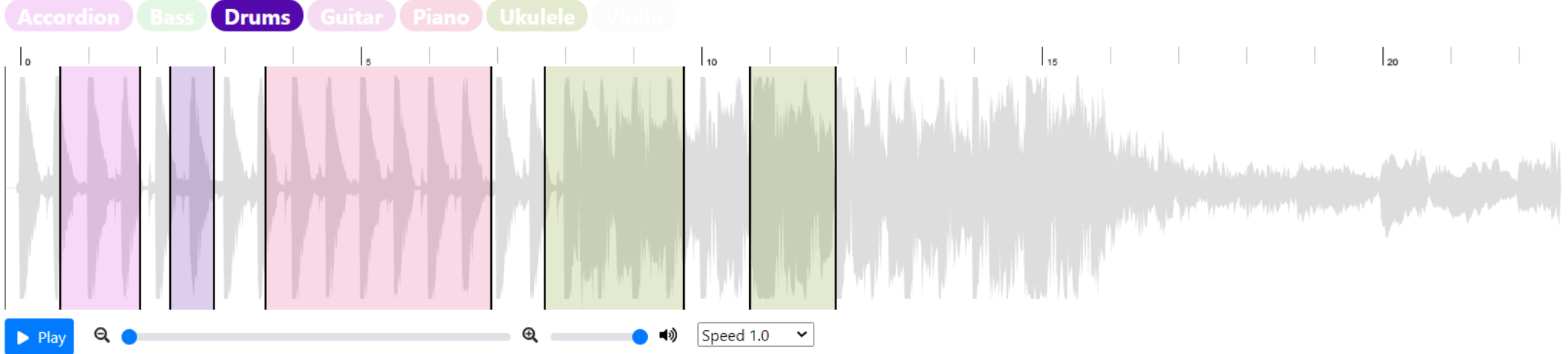
LABEL BUDDY LINKS

▸ GitHub repository: https://github.com/eellak/gsoc2021-audio-annotation-tool

▸ GSoC final report: https://github.com/eellak/gsoc2021-audio-annotation-tool/blob/main/docs/GSOC_FINAL_REPORT.md

▸ UI/UX improvements branch: https://github.com/eellak/gsoc2021-audio-annotation-tool/tree/UX_improvements

▸ https://labelbuddy.io/

  ▸ Now serving a simple demo

  ▸ Username: demo

  ▸ Password: labelbuddy123

ACKNOWLEDGMENTS AND CONTRIBUTIONS

- ▶ Pantelis Vikatos, Markos Gogoulos (mentors)
- ▶ Lina Aggelopoulou, Jen Anastasopoulou (consulting team)
- ▶ GFOSS and ORFIUM (support during the GSoC period)

THANK YOU FOR YOUR ATTENTION

ANY QUESTIONS?

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