

Education

- 2019 – 2020 **Master in Sound and Music Computing**, *Pompeu Fabra University*, Barcelona, Spain.
Sep Exp. Aug
- Developing "OpenFSE: Audio embeddings trained with Freesound tag similarity"
- Studying similarity learning with triplet loss to produce expressive deep audio embeddings
- 2015 – 2019 **Bachelor of Engineering**, *Doshisha University*, Kyoto, Japan.
Apr Mar

Experience

- 2019 – 2019 **Full-time Machine Learning Intern**, *Qosmo*, Tokyo, Japan.
Apr Sep
- Implemented CNN model for tempo detection in Tensorflow which runs on DJ equipment
- Implemented object detection feature using YOLO9000 to a video search tool
- Built a browser automation tool with Selenium to collect audio data from the web for training machine learning models
- Designed and built a browser-based image annotation tool using JavaScript and HTML5 which was used by online annotators
- 2018 – 2018 **Research Assistant**, *Doshisha University*, Kyoto, Japan.
Apr Jun
- Developed a phoneme segmentation tool with HTK and increased the productivity of manual segmentation by twice

Publications

- 2019 **Investigating context features hidden in End-to-End TTS.**
May
- Proposed an analytical framework to make the result of End-to-End TTS explainable
- Accepted for the IEEE International Conference on Signal and Speech Processing 2019 (ICASSP)

Selected Projects

- 2018 – present **Joytan App**, *Founder*.
Jan
- Lead an international team of 50+ members to automate and outsource multilingual teaching video for our YouTube channel which has grown into 50,000+ subscribers
- Built NLP and TTS tools to produce language-teaching materials based on bilingual corpora
- Built an analytic tool to visualize the performance of our videos using Selenium and YouTube API
- 2019 – 2019 **Joytan-REC**, *Maintainer*.
Aug Dec
- Designed and developed an Android app in Kotlin to crowdsource multilingual speech recordings for language-teaching materials
- Added speech denoising function for Firebase running on cloud servers
- 2019 – 2020 **Joytan Public**, *Maintainer*.
Aug Feb
- Designed and developed a website to review audio files with authentication system and discussion forum using jQuery, Bootstrap, and Firebase.
- Optimized NoSQL database to store user information and audio files
- 2018 – 2019 **NTT Corevo Challenge**, *Competitor*.
Dec Jan
- Developed deep learning model using Keras for audio classification (Gender x Age)
- 2017 – 2018 **Joytan**, *Maintainer*.
Sep Mar
- Automated audio/textbook creation using speech synthesis and web-scraping
- Released a cross-platform desktop (Linux, Windows, and OSX) application using PyQt5
- 2017 – 2017 **Pycraft**, *Contributor*.
May Jun
- Fixed data structure flaws and made it easier to extend the game functionality
- 2017 – 2017 **CGINC**, *Maintainer*.
Apr May
- Developed a Povray-like raytracing software in C
- Implemented specular light computation and a CSG-model definition parser from scratch