ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Distributed Computing

Prof. R. Wattenhofer

# Automatic Karaoke Song Annotation with Deep Learning

Be it KTV or Singstar; karaoke is a pastime loved by many. However, creating new karaoke songs is a labour intensive job, as lyrics need to be aligned to the singing manually. Furthermore, pitch annotations also need to be done by hand (or rather by ear), and if not done by professionals, the annotations will likely be quite far off.

In this thesis we aim to enable the automatic generation of karaoke songs using deep learning techniques. We already have a few ideas on how to approach this topic, and we can build on previous work done by us. There is also some prior work on this topic, and we encourage you to have a look (Google Scholar!).

If this sounds interesting to you, do not hesitate to contact us.

**Requirements:** Knowledge in Deep Learning, or solid background in Machine Learning. Implementation experience is an advantage. You should be able to read the first 12 chapters of the "Deep Learning Book" by Goodfellow et al. (available for free online from MIT press). If you are interested in the topic but new to deep learning we expect you to complete an introductory deep learning course before applying for the thesis, such as Andrew Ng's coursera course (use the free trial!)[1] or this Udacity course[2].

**Interested? Please contact us for more details!**

## Contacts


- Gino Brunner: `brunnegi@ethz.ch`, ETZ G63
- Oliver Richter: `richtero@ethz.ch`, ETZ G63


[1] `https://www.coursera.org/specializations/deep-learning`
[2] `https://classroom.udacity.com/courses/ud730`