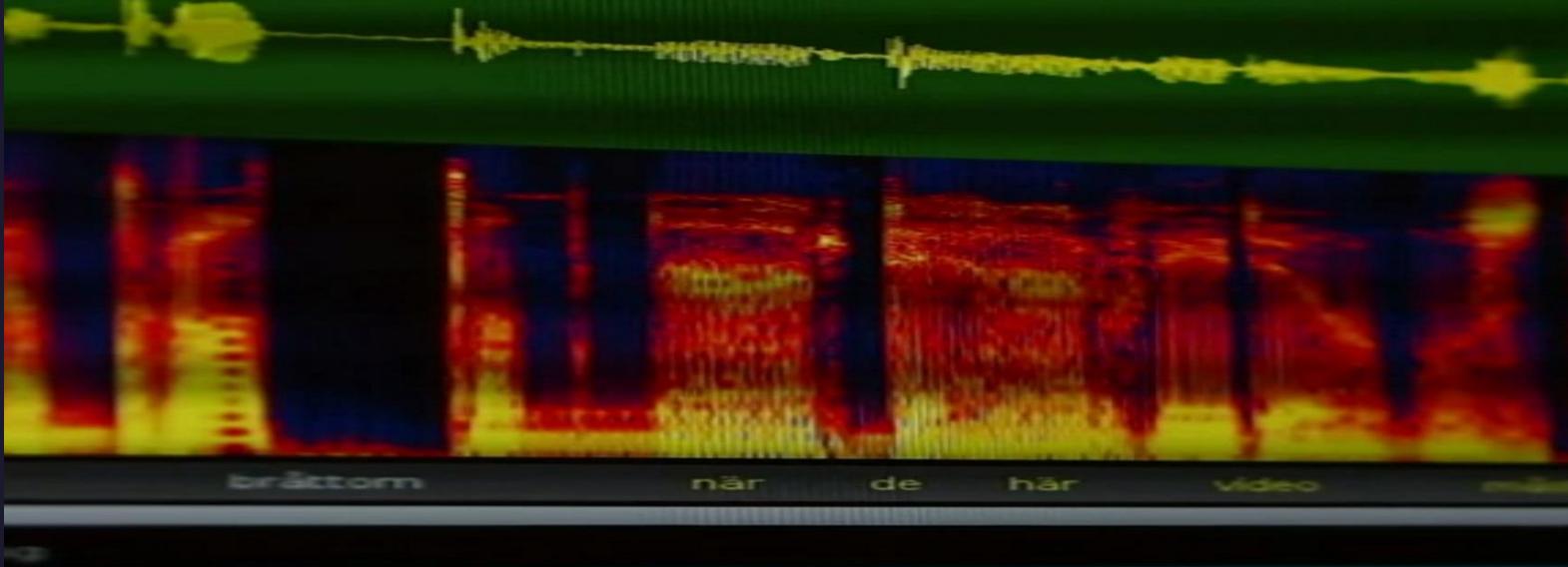




DigiTala project 2019-2023

<https://www2.helsinki.fi/en/projects/digital-support-for-learning-and-assessing-second-language>



- Goals:
- Developing a digital tool for assessing speaking in high-stakes contexts (Finnish Matriculation Exam)
- Developing a pedagogic tool to provide feedback to students during oral practice
- Collaboration between fields of science (speech technology, phonetics, language education)

Who are we?



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Starting point in the advance of speech technology

- Automatic speaking assessment
 - automatic speech recognition, ASR
 - automatic scoring system
 - automatic diagnostic feedback
- Examples of automated tests of speaking:
- TOEFL-iBT (ETS)
- Pearson Test of English
- Duolingo
- Linguaskills

Digitala path towards Moodle-based application 2019-2023

Task planning (A1-A2, B1, B2)

Assessment criteria

School contacts

Research permissions

Choosing Moodle platform

Training expert raters

Feedback form

Training machine with human ratings & samples of various CEFR levels

Feature-based, directed, non-directed machine learning



Planning

Sampling

Rating

Analysis

Models of machine learning

User interface

Moodle
~19,5 h speech samples
Survey on experiences

Ratings: Rasch-analysis,
reliability check
Speech samples: fluency,
pronunciation
Experiences and perceptions of
learners and raters

- Tool implementation, turning features into feedback
- Planning functionalities
- Testing the tool

Current functionalities of the Moodle-app

TEACHER CAN

- Create and edit speaking tasks
- Explore : student samples
 - Listen
 - View automatic ratings
- Suggest changes to the rating and give written feedback
- Download automatised rating reports from Moodle

LEARners/STUDENTS

- Test the microphone
- View task instructions and materials
- Record, listen and submit their sample for rating
- View the automatised rating of their samples
- View teacher's feedback



Strengths and limitations of the current tool

STRENGTHS

- Time and space independent training
- Sparing teacher rating time
- First automatised rating tool for domestic national languages Finnish and Swedish
- providing feedback on several components of oral proficiency

LIMITATIONS

- Long processing time → User waiting time
- Construct coverage?
- Machine rating and feedback are dependent on the amount and quality of training data (possibly limited)
- Maintenance of the tool is uncertain after the termination of the project (31.8.2023)

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