COURSE ANALYSIS, postgraduate course

Third cycle courses, EECS School, KTH , from 2018

An asterix (*) denotes non-compulsory data.

Course data

Course name: Music informatics

Course ID: DT2470
Credits: 7.5
Credits per module: 7.5
Time period for course: HT2021
Teachers: Bob L. T. Sturm and André Holzapfel
Examiner: Sten Ternström
Classroom hours: Almost twice a week for 2 hours
Nr of registered students: 40
Examination rate, in %: 100

Goals

Global course goals:
1. Overview of music informatics, its history and applications as well as a review of basi principles, such as music representation, analog to digital conversion and Fourier transform.
2. Feature extraction that shows how music data can be described in different domains e g time, frequency and time-frequency.
3. How music content at different levels of abstraction can be expressed and compared with distinctive features.
4. Ways to model music data by means of statistical machine learning methods. Evaluation of models of music data and their application in reality.

How the course design helps to fulfill these goals: Lectures, labs, project and written report

Pedagogical development - I

***Changes made* since previous time course was given:**
- All labs available at the start of the course.
- Make labs be scored to count toward grade.

Course evaluation; comments from students

Based on the anonymous questionnaire.

Evaluation response rate: 27.5%

Overall student view*

Since there is not an exam, studying becomes a bit optional and conditional to the fact that the course content is appealing. From my point of view, it is very interesting. All courses should be like this as much as possible.

I personally do not need the urge to study / recap what we did in the lectures, but rather I spend some "extra" time on the course because I like the content, because I am mathematically-focused and want to know about the algorithms, and also because the professors give references to papers, open problems and applications that I find very interesting.

The labs were good; they had a good level and the content they taught was good as well.

I think the course required about as many hours as expected for a course with this number of credits.

It was very well structured

Best aspect: Not having an exam, and having lectures focused on open problems, on personal research experience and on applications, instead of focusing on very specific algorithms and details that are already well referenced.

Negative comments:

I am not sure about this, but I sometimes felt that the open problems and research questions in Music Informatics were too much restricted to the personal experience of the professors and / or on the ISMIR conference (this is good, because you explained stuff that you really know, but I sometimes missed a bigger spectrum). It would also be good to keep track of more recent applications of music informatics, like https://rave.dj/ .

The overall tempo of the course is too low. The projects could have been done a few weeks earlier instead of during exam weeks.

More clear instructions for the project, it was a bit hard to actually estimate how much you should do, and the level of scientificness. Of course you always want to explore further and spend more time on the project, but some clearer instructions to what is good enough (beside the grading criteria) would be good. Some projects examples more in line with the size of the project in this course would also be good.

Good with lab sessions, but maybe some more feedback would be good.

Pre-knowledge, comments*

KTH course page said no recommended prerequisites but personally, I feel like some background in ML would've helped a lot

Course design, comments*

It would be good to have some quizzes, since they usually help me a lot in learning the concepts and details.

Maybe move the last lab a week forward so that we have more time spent on the project. Now we have to finish both lab 4 and (most part of) the final project by the end of the week and it is really tough.

I think it would be better if the project did not overlap with the labs in terms of time. Me and my lab partner completed all labs before starting on the project and we both felt like there was not enough time for the project at the end of the course.

Those are probably difficult things to do, considering how fast this is evolving... Maybe asking the students themselves to find recent papers (non-necessarily ISMIR) and / or applications on the first weeks, and make them write some short non-technical comments about them, would be a good idea to get those.

Literature, comments: none

Examination, comments:

Course teacher’s impressions from the evaluation

Comments: The student observations align with my own as to what changes should be made in the next edition.

Course teacher’s summary

Overall view: The course ran smoothly, and pretty much followed the course book.

Positive comments: Attendence was ok throughout the course, taught in a hybrid way.

Negative comments: The lab schedule was ok until the last lab. Move them forward a bit. The project requirements should be made more clear, and the project proposal needs to be a hand-in.

View on pre-knowledge*: Fine

View on course design* The project quality was less spread this time, with some very good, and only a few very poor (and failing).

View on course material: The material is timely and appropriate for the learning objectives. The labs provided hands-on experience.

View on examination: Projects

Pedagogical development - II

Outcome of course changes made **since last time course was given:**

- All labs available at the start of the course. This worked fine.
- Make labs be scored to count toward grade. This worked fine.

Changes to be made **before next time course is given:**

1. **Schedule needs to be revised such that four labs are completed before project work begins.**
2. **Separate assignment for project proposal**
3. **Add weekly quizzes**
4. **Revise the intended learning outcomes and assessment criteria:**

LAB1, Laborationer/Laboratory work, 3.0 hp A-F
PRO1, Projekt/Project, 3.0 hp A-F
UPP1, Uppsats/Written report, 1.5 hp A-F

After passing the course, the student should be able to
• summarize features that can be extracted from a music signal;
(LAB1, PRO1, UPP1)
E: name some features
C: also describe how basic low- to mid-level features are computed
A: also describe the relevance of features for music informatics applications

• summarize methods that can be used for modeling music data;
(LAB1, PRO1, UPP1)
E: name some modeling methods
C: also describe how basic modeling methods work
A: also describe relevance of models for music informatics applications

• Design, implement and evaluate music informatics systems (LAB1, PRO1)
E: use existing software libraries to extract a few basic features, to model them, and to evaluate them using basic approaches
C: also use existing software libraries to extract a variety of relevant features, to model them with relevant methods, and evaluates them using many approaches
A: also implement feature extraction, implement models, and implement evaluation procedures

Other

Comments*