

# Digital Learning Tools in Music Technology

A letter from the front line

Jon Marius Aareskjold (UiT The Arctic University of Norway)

Inspiration!!!

# Who is this guy?

- Music producer (I worked with Beyoncé!!!)
- Composer
- Build my own algorithms within max msp
- Associate professor in music technology
- Artistic research (a.o. music creation based on sounds of the aurora)
- Traditional research (in distributed performance, production practice, applying machine learning in creative decisions)



```
if (you know basic c++) {  
  raise hand  
}  
else {  
  leave hand on table  
}
```

Who has made their own video lecture – or is helping others make lectures?

Who wants to or needs to make their own video lecture?

Who has a boss that wants them to make a video lecture?

Soooo... How do you make great digital learning tools?

- It's all about production?
- Slick, smooth animations?
- Well-lit good looking videos?
- Content, content, content?

Which MOOC is this?





## 2. Machine Learning: Master the Fundamentals / Stanford University

The MOOC Machine Learning, from Stanford University on Coursera, covers machine learning, data mining, and statistical pattern recognition at broad level. More specifically, topics include supervised learning, unsupervised learning, best practices in machine learning, case studies and application of learning algorithms for building smart robots, text understanding, computer vision, medical informatics and more. Total enrollment since the course's launch in Oct 2011 is over one million students, making the MOOC the most well enrolled in the history of online education (at time of writing)! The course, which is archived, and which led to the founding of Coursera, is taught by Andrew Ng, Ng is an associate professor of Computer Science at Stanford and Chief Scientist of Baidu. He co-founded Coursera with Daphne Koller, another Stanford computer science professor. Ng is Chairman of Coursera, while Koller is President

The Stanford University logo, featuring the word "Stanford" in a red, serif font.

### **Additional info:**

- **Platform:** [Coursera](#)
- **Institution homepage:** [Stanford University](#)
- **Total enrollment:** 1122031
- **Lecturers:** Andrew Ng

Source: <https://www.onlinecourserereport.com/the-50-most-popular-moocs-of-all-time/>

say something interesting about something interesting

say something interesting about something interesting

On the right platform

But – that said

Production value is important

(Unless you are Andy Ng)

# Teaching music production

- one on one/small groups
- “like teaching someone to fly”
- learning by means of a practical approach
- Each student needs many “Flight hours” in the studio
- limited resources - max 5 hours of guidance with each student
- Teacher or instructor present in studio makes students passive
- Being on call for problem solving is demanding

# Studio assistant app

- Learning tool + support tool
- Flipped classroom-approach





# Tools for making digital learning tools:

- Wrap the content in a well-built package
- Canvas/Fronter/SMART is ok but custom built is easier and often works much better
- Customizing the delivery package to the content is easier than customizing the content to the delivery package
- Creating an app is about 150.000 NOK (16.000 EUR)

# Tools for making digital learning tools:

- Wrap the content in a well-built package
- Canvas/Fronter/SMART is ok but custom built is easier and often works much better
- Customizing the delivery package to the content is easier than customizing the content to the delivery package
- Creating an app is about 150.000 NOK (16.000 EUR)

# Production value for videos:

- Camera – good enough
- Sound - easy
- Lighting is everything!

# Production value for videos:

- Camera – good enough
  - Sony A7
  - Canon EOS 5d mkIV (or 6d, 7d)
  - Nikon, HQ webcam, gopro)
- Sound – easy
  - Zoom H4
  - Consider a clip-on microphone
  - and a wireless kit?
- Lighting is everything!
  - Manfrotto Litepanels

# The extra 10%

- Editing
  - A professional editing software like Adobe Premiere or Final Cut X is very powerful but much can be achieved with simple software like Camtasia
  - Remove everything that is not important to the storytelling
  - Do not worry about realistic timeline
  - Videos should be short, less than 2 minutes is perfect
- Grading
  - Color grading (think Instagram filters) adds mmph to your videos

# Sources

- Høcker, red. 2015: Å lære sammen/CEMPE
- Hwang, Wu, 2011: Advancements and trends in digital game-based learning research: a review of publications in selected journals from 2001 to 2010
- Csikszentmihalyi, M. (1999): Implications of a Systems Perspective for the Study of Creativity. In R. Sternberg (ed.) *Handbook of Creativity*. Cambridge: Cambridge University Press. pp. 313-335.

Questions?