# S OpenScore

Open-sourcing music with open source software

A collaboration between MuseScore, IMSLP and partners

Speaker: Peter Jonas FOSDEM 2017









liberated maps

liberated books

OpenScore will liberate sheet music

Paper \_\_ Bitmap \_\_ XML

Original score

Scanned pages

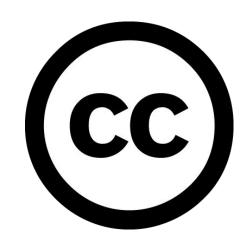
Semantic score







# Creating open source sheet music



#### Musical source code

Editable & parseable by software tools

Creative Commons

Free for everyone, for any purpose, forever

# Listen

Play the music and follow the score

# Edit

Change notes, instruments, and transpose

# Share

Small file sizes ideal for email and social media

## Step 1: Scanning

#### Paper to Bitmap



Largest online archive of public domain sheet music

Contains scanned PDFs of classical scores

Supported by

Donations
Optional subscription



# Step 2: Transcribing

Bitmap to XML



World's most popular music notation program & largest community of sheet music creators



Free and open source (GPL v2) for Windows, Mac and Linux

#### Supported by

Apps for Android and iOS Website for sharing scores

# Universal compatibility

FLAC MIDI MP4 MP3

MSCZ MusicXML OGG

PDF PNG SVG WAV

# cc creative commons



# Freedom

### Copy

Unlimited copies

### **Adapt**

Translate, arrange, borrow

#### Share

For free or commercially

No copyright restrictions

Just credit OpenScore

#### How it works



Members donate time in transcribing scores and checking quality



Rewarded with MuseScore PRO membership



Backers donate money to coordinate transcription effort and provide rewards



Rewarded with credit and perks like score dedications

#### Kickstarter backers



Produce transcriptions

### OpenScore Partners



Open source music software



Public domain music

music21

Music parser/Braille converter



Art and visualizations

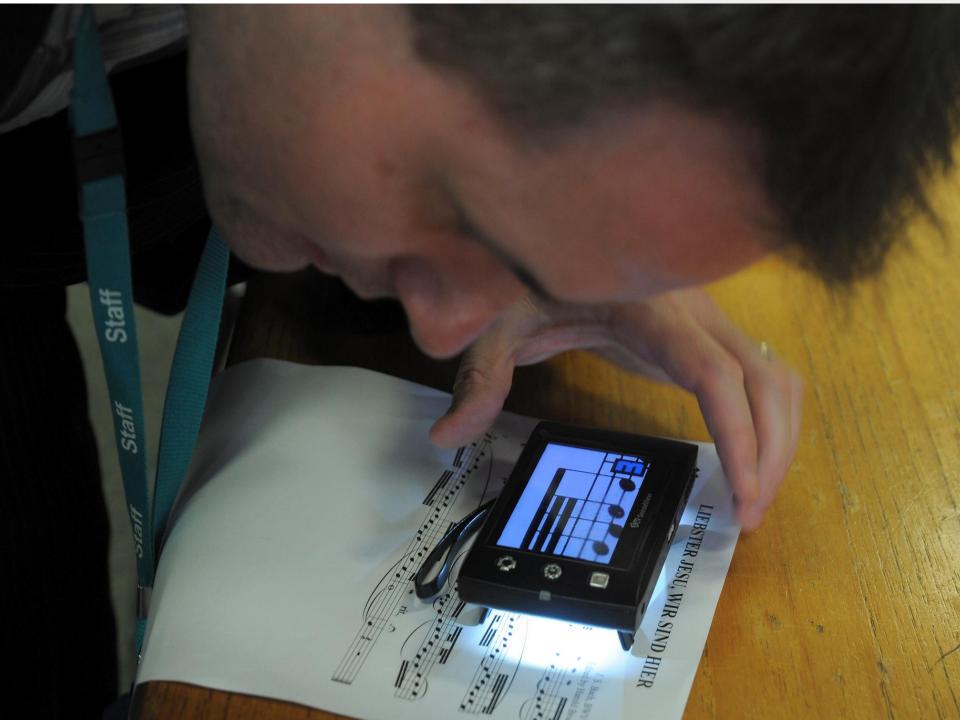




Music in education



# Accessibility





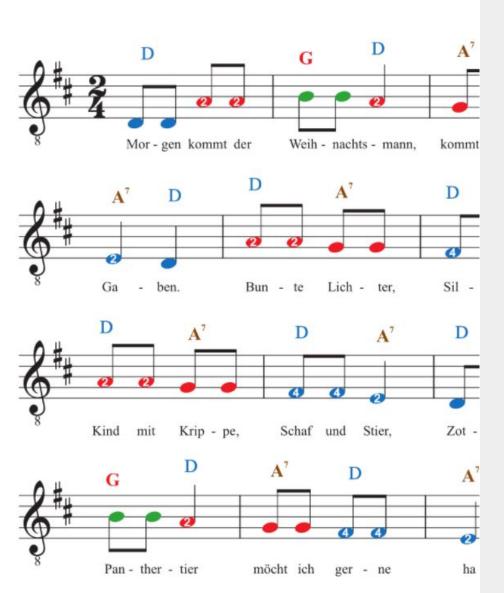
### Modified Stave Notation

for partially sighted musicians



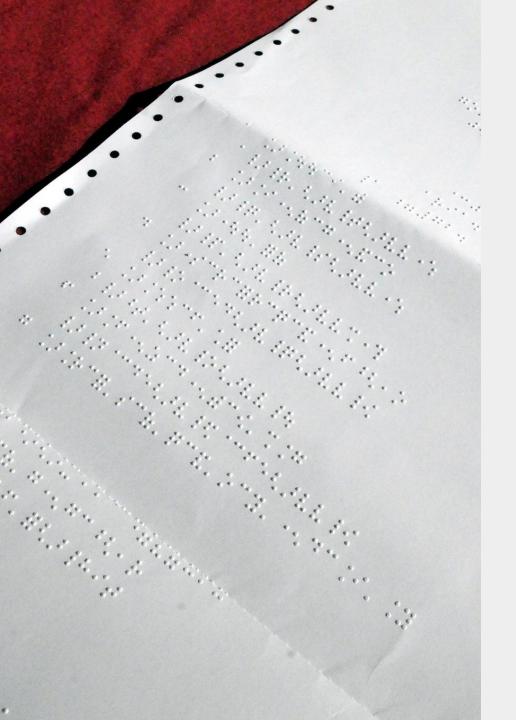
#### Morgen kommt der Weihnachtsma

Melodie: Volksweise um 1770 Text: nach A. H. Hoffmann von Fallersleben



#### **Colored notation**

for dyslexic and visually impaired musicians

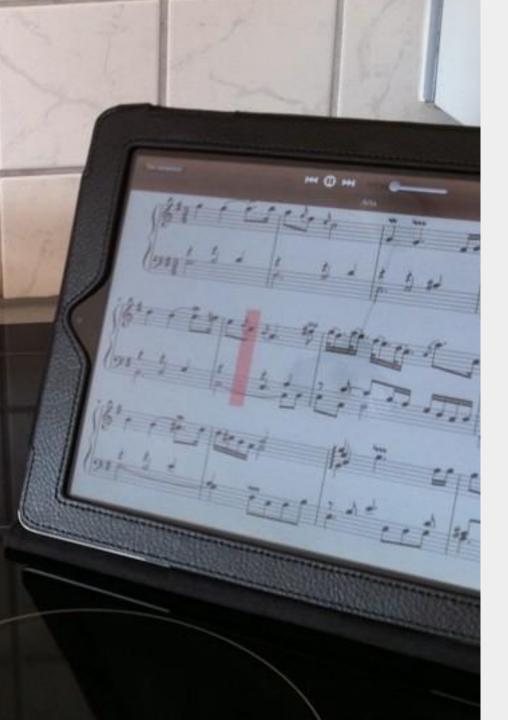


### **Braille music**

for blind musicians



# Notation everywhere



Use on tablets, desktops, phones, or televisions.



#### made with musescore



3:01

#### Sword, Dance, N Maxim Suvedi)

Theweirdomaxim 8 months ago • 559 vie This is a composition th I thought japanese dance



#### Summit (Yay!!! [

DualaXis 8 months ago • 134 vie Yay. This is another son music made with Muse!



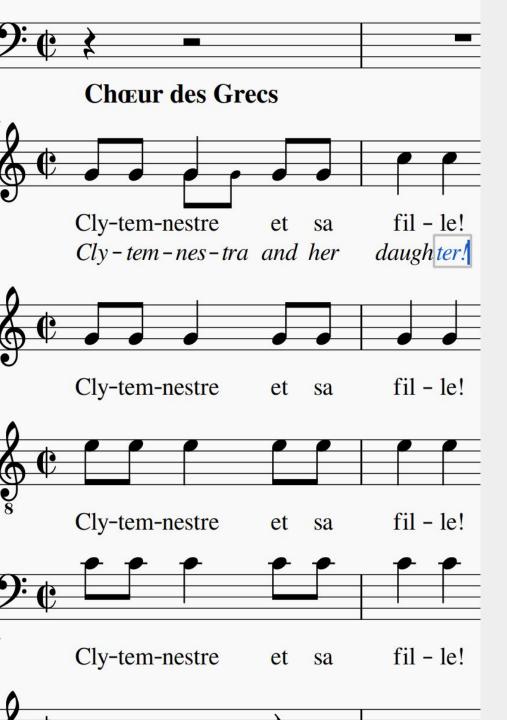
#### Pirates of the Ca

Juan Resendiz 8 months ago • 365 vie Sheet music made with https://musescore.com



#### "Battle Cries" - C

MuseScore816235 2 years ago • 2,511 view Something I started a w Publish and share digital scores for use in apps, on the web, YouTube, and more.



### Education

#### Music for teaching

Language students at the University of St Andrews use MuseScore for the *Translating French Opera* module by Dr Julia Prest.

Edit the score and share without restrictions.

#### More info

<u>st-andrews.ac.uk/modlangs/people/french/prest/</u> <u>st-andrews.ac.uk/modlangs/research/impact/iphigenie/</u>

```
from music21 import *
```

```
n = note.Note("D#3")
n.duration.type = 'half'
n.show()
```



```
littleMelody = converter.parse("tinynotation:
d8 f g16 a g f#")
littleMelody.show()
```



littleMelody.show('midi')

#### Research

#### Music information retrieval

Use open source toolkits like Music21 to extract information from the score.

Publish findings under your licensing terms.

#### More info

http://web.mit.edu/music21/ https://randomsheetmusic-1055.appspot.com/

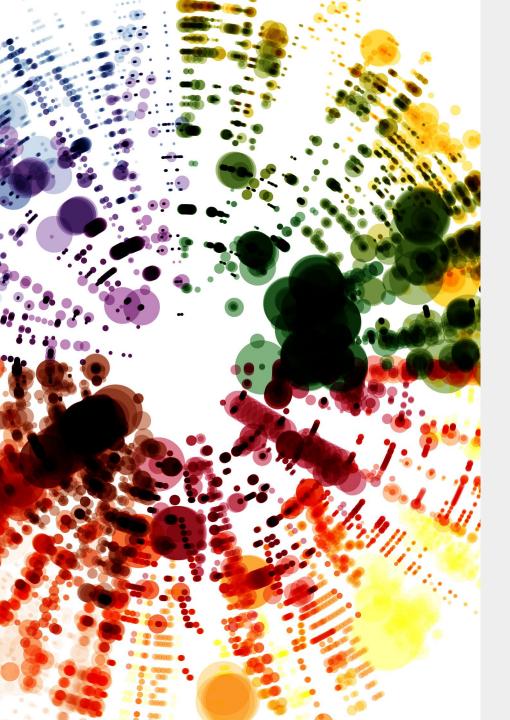
## Machine learning

Neural Networks need digital score data to train for

- Digitize scanned sheet music (OMR)
- Audio to Score Transcription
- Music accompaniment generation

#### More info

https://magenta.tensorflow.org



### Art

#### **Music visualizations**

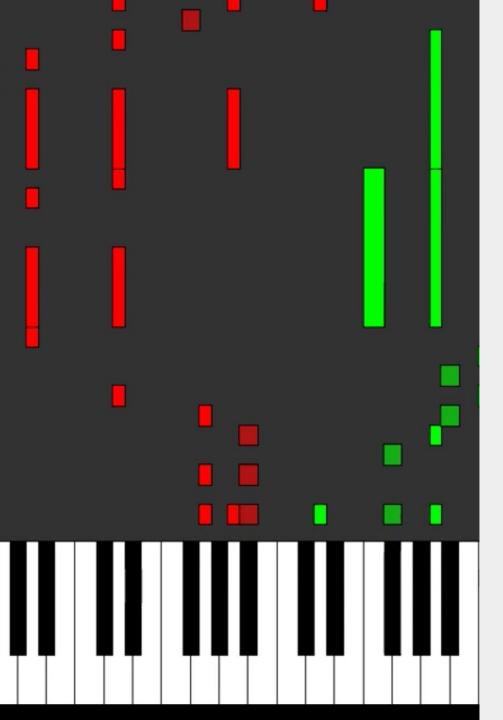
MuseScore files are parseable by digital tools

Possible to extract information about the music (note pitch, duration, etc.)

Create and sell artwork

More info

Off the Staff by Nicholas Rougeux



# Learning By playing music games

Open the MIDI file in music learning games for an instant learning experience.

#### More info

https://github.com/midifi/midifi

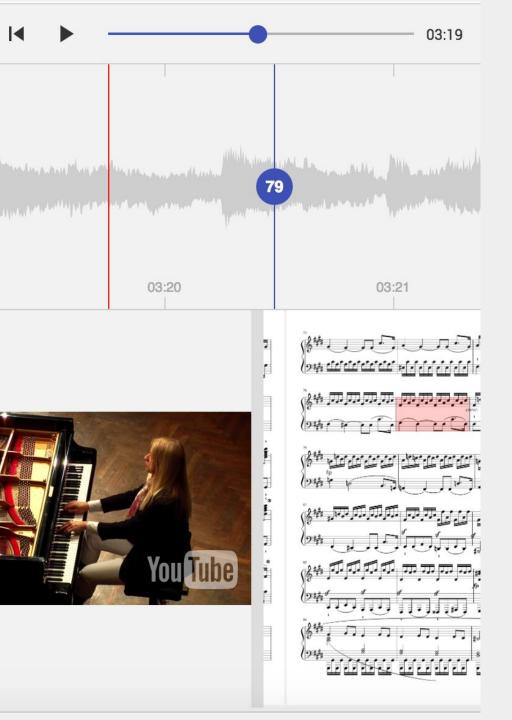


# Remixing public domain

Open MIDI/MusicXML into DAW for remixing

More info

https://ardour.org/



# Enriching

#### **Syncing scores with performances**

Sync notes from a digital score with recorded performances

Now available on MuseScore.com as a turn key solution based on open source technology developed at QMUL in London

#### More info

http://eecs.qmul.ac.uk/~simond/match/

# Get notified about the launch via musescore.org/openscore

or visit the MuseScore booth here at FOSDEM **Building K - Level 2** 



# OpenScore

Liberating public domain music