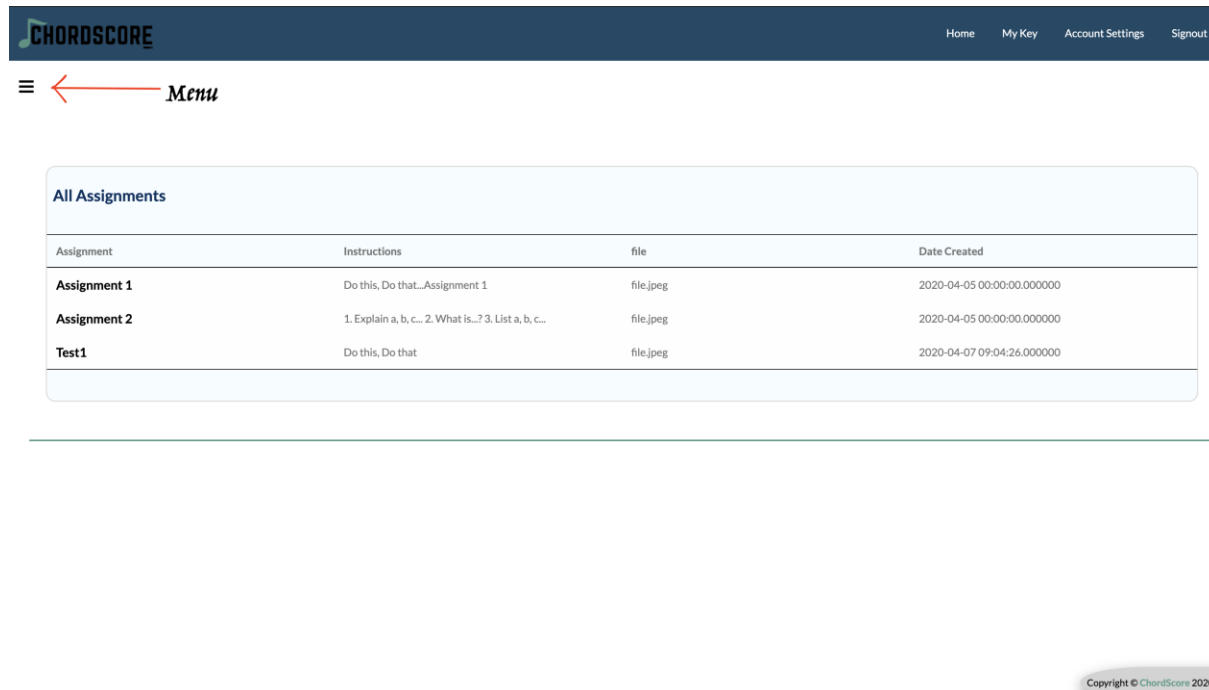


Report #6 Group #1 – 4/6/2020 – 4/19/2020

1. Web Application Development

In the last two weeks, we primarily focused our web development work on developing the assignment definition page in the instructor account. You will also notice that we updated some parts of the application's appearance. The images below illustrate the assignment creation process by the instructor.

Step 1.

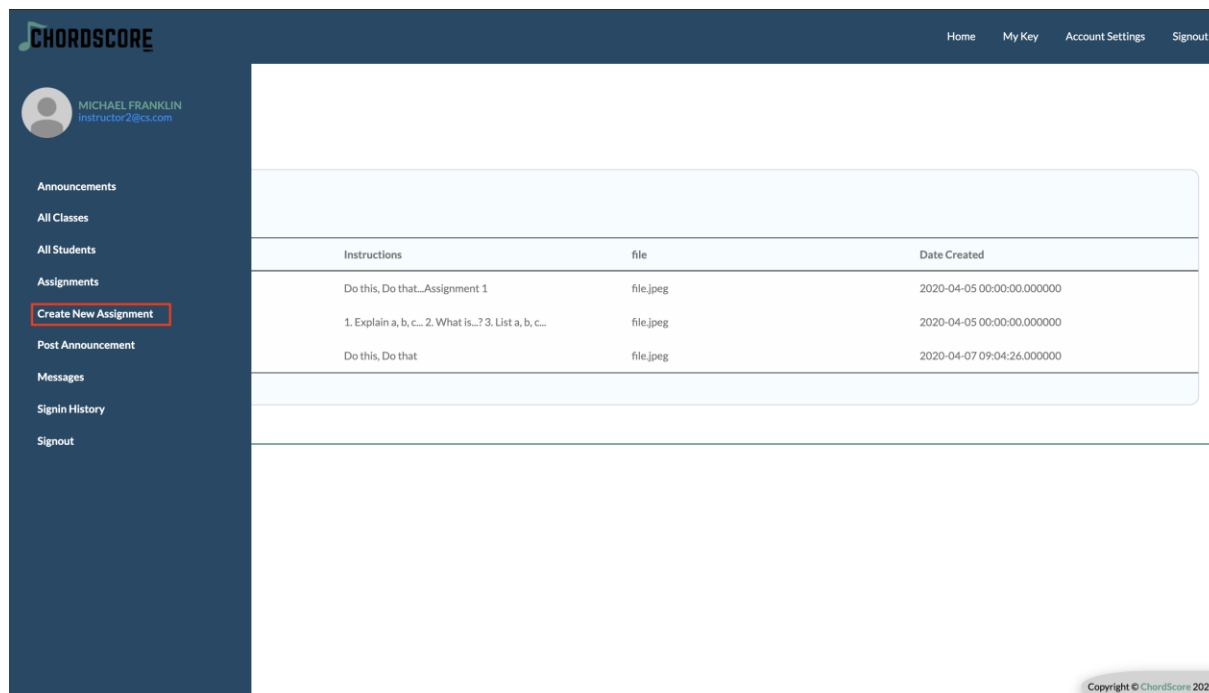


The screenshot shows the ChordScore instructor interface. At the top, there is a dark blue header with the ChordScore logo on the left and navigation links (Home, My Key, Account Settings, Signout) on the right. Below the header, there is a red arrow pointing left with the word "Menu" next to it. The main content area is titled "All Assignments" and contains a table with the following data:

Assignment	Instructions	file	Date Created
Assignment 1	Do this, Do that...Assignment 1	file.jpeg	2020-04-05 00:00:00.000000
Assignment 2	1. Explain a, b, c... 2. What is...? 3. List a, b, c...	file.jpeg	2020-04-05 00:00:00.000000
Test1	Do this, Do that	file.jpeg	2020-04-07 09:04:26.000000

At the bottom right of the page, there is a small copyright notice: "Copyright © ChordScore 2020".

Step 2.



The screenshot shows the ChordScore instructor interface. At the top, there is a dark blue header with the ChordScore logo on the left and navigation links (Home, My Key, Account Settings, Signout) on the right. Below the header, there is a sidebar on the left with the following menu items: Announcements, All Classes, All Students, Assignments, Create New Assignment (highlighted with a red box), Post Announcement, Messages, Signin History, and Signout. The main content area is titled "All Assignments" and contains a table with the following data:

Instructions	file	Date Created
Do this, Do that...Assignment 1	file.jpeg	2020-04-05 00:00:00.000000
1. Explain a, b, c... 2. What is...? 3. List a, b, c...	file.jpeg	2020-04-05 00:00:00.000000
Do this, Do that	file.jpeg	2020-04-07 09:04:26.000000

At the bottom right of the page, there is a small copyright notice: "Copyright © ChordScore 2020".

Step 3.

CHORDSCORE

HomeMy KeyAccount SettingsSignout

Type in assignment name

Create New Assignment

Assignment Title

New Assignment

Next

Copyright © ChordScore 2020

Step 4.

CHORDSCORE

HomeMy KeyAccount SettingsSignout

← Back

Choose assignment file

Create New Assignment

Choose file | No file chosen

Create

Notation

Text/Written

Copyright © ChordScore 2020

Step 5.



← Back


Create New Assignment

D21. Homework Packet Graded Homework 7 Name: _____

Analysis:

- Analyze all RNs, NCTs, and cadences

12. Beethoven, Piano Sonata, op. 7, II



key _____

No file chosen

Copyright © ChordScore 2020

Notation
Text/Written

Assign fields

Step 6.



← Back


Create New Assignment

D21. Homework Packet Graded Homework 7 Name: _____

Analysis:

- Analyze all RNs, NCTs, and cadences

12. Beethoven, Piano Sonata, op. 7, II



key _____

No file chosen

Copyright © ChordScore 2020

Notation
Text/Written

drag over section to define field

Step 7.



[← Back](#)

Create New Assignment

selected field will be highlighted

D21. Homework Packet
Graded Homework 7

Name: _____

Analysis:

- Analyze all RNs, NCTs, and cadences

12. Beethoven, Piano Sonata, op. 7, II

key _____

key _____

Analysis:

- Analyze all RNs, NCTs, and cadences

7. Schubert, "Des Müllers Blumen" (The Miller's Flowers)

Text/Written

Copyright © ChordScore 2020

Step 8.



[← Back](#)

Create New Assignment

define multiple fields

select area

DDL Homework Packet
Graded Homework 7

Name: _____

Analysis:

- Analyze all RNs, NCTs, and cadences

12. Beethoven, Piano Sonata, op. 7, II



key: _____



Analysis:

- Analyze all RNs, NCTs, and cadences

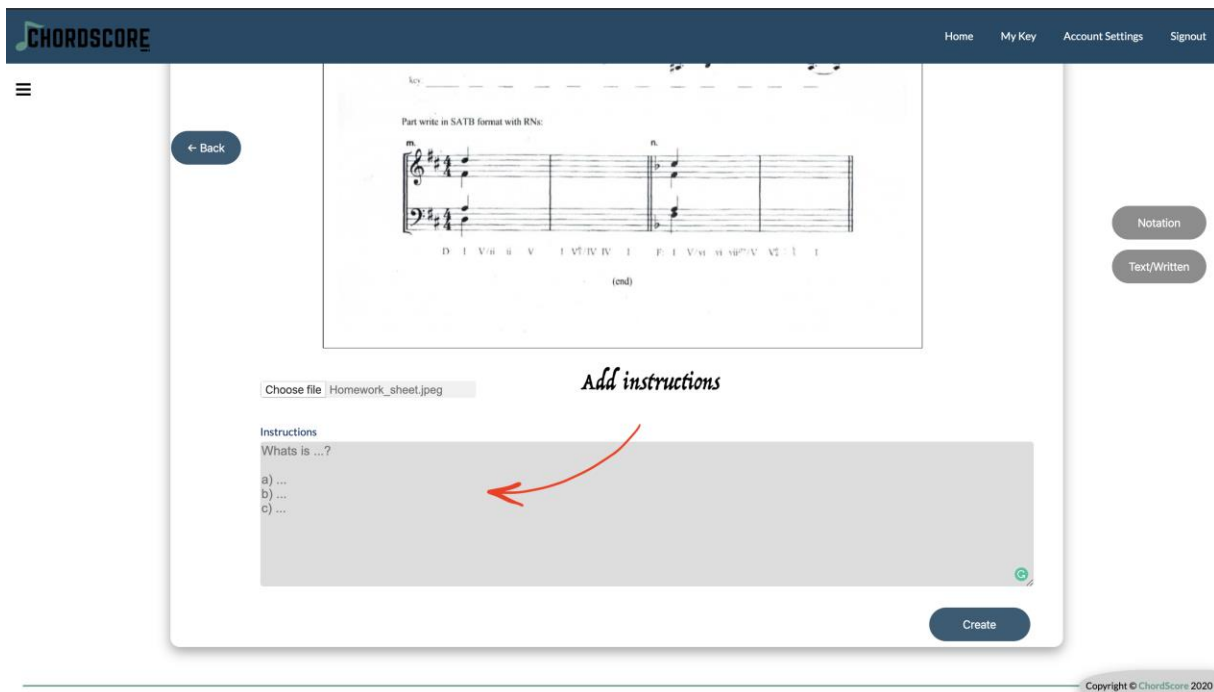
7. Schubert, "Des Müller's Blumen" (The Miller's Flowers)



Text/Written

Copyright © ChordScore 2020

Step 9.



2. Data Collection

We finished converting the 20 distinct images to *Musixml* digital format using the Musescore application. This completed our data collection.

3. OMR Development

In terms of OMR Development, we are in the process of preparing the data for use in a C-RNN. Though we are behind schedule on this, we are still hopeful of achieving preliminary results in the form of accurate note detection rates that can give a proof-of-concept for this project and render it of interest to those designing music theory pedagogy.

3.1. Preparing bounding box data

For use in training the C-RNN, we need for each music notation image a corresponding collection of note symbol bounding boxes and labels with five pieces of data – *note symbol type name*, *minimum-x*, *minimum-y*, *maximum-x*, *maximum-y*. Since these are to be output for an RNN layer in the first part of our network, bounding box entries had to be parsed from bounding box XML files from the *Deepscores* and *CVC-Muscima* dataset, note symbol names had to be translated to the set of note symbols ChordScore relies upon, and the resulting data had to be converted to a vector that one-hot-encoded the note symbol name.

The reduced ChordScore note symbol name vocabulary consists of the following 16 symbol names: notehead-blac, notehead-empty, whole-rest, half-rest, quarter-rest, 8th-rest, 16th-rest, 32nd-rest, 64th-rest, augmentation-dot, g-clef, f-clef, c-clef, key-signature-accidental, accidental, time-signature. Below are the note symbol vocabulary translation from *Deepscores* (Fig. 3.1.1) and *CVC-Muscima* (Fig. 3.1.2) to ChordScore vocabulary:

3.2. Preparing chord sequence data

...