



Digi-workshop #3

Transkribus: updates.

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(Huygens ING)

Digital workshop, 9 October 2020

Noon CEST

Pylaia

- What is Pylaia and does it differ from HTR(+).
- How to use it.

Tables and LA

- Developments in the field of tables/ how to add separation lines in your LA.

Small regions

- How to remove small regions (noise).

Sample sets

- How to create a sample set (to function as a sturdy basis for your models).

Other updates

- Small update on P2PaLA
- Read and Search
- Webversion
- masking text

Pylaia

- In this section you will learn more about Pylaia.

HTR → HTR(+) and Pylaia

- Keep in mind **HTR stands for Handwriting Text Recognition**.

From that, there are different 'techniques' that are being used for the recognition. These have (confusingly enough) similar names:

1. HTR: original tool with RNN to recognise the handwriting
2. HTR+: faster tool. Created by Planet (Germany) and licensed to Transkribus. This will be phased out next year, replaced by IDA (which will be faster than HTR+).
3. Pylaia: open source tool by the University of Valencia (no license, hence the lower costs).

Pylaia

- If you have **curved lines (or pages)** HTR+ generally works better; but this will improve in pylaia.
- **Pylaia models cannot be used for Text2Image**, you'll need HTR+.
- Pylaia is PyTorch based (aka Machinelearning Library).
- Benefits Pylaia: you can adjust more Parameters and the Netstructure can be changed (if you are familiar with machine learning). More can be found on: <https://github.com/jpuigcerver/pylaia>
- Same amount of pages necessary; but preprocessing is important.
- You can train Pylaia to fill out abbreviations by using \$ as a sign between the abbreviated form and the filled out form. *new sign will come!*
- Pylaia can export word-coordinates, which is interesting if you want to be able to show the exact word location in an image/text (e.g. IIF).

Trainingsbutton

- In order to train PyLaia-models you will need – like with HTR+ - ask the Read-Coop team to provide you with the button.
 - Info@readcoop.eu

This is because not everyone is going to be using this.

Server Overview Layout Metadata **Tools**

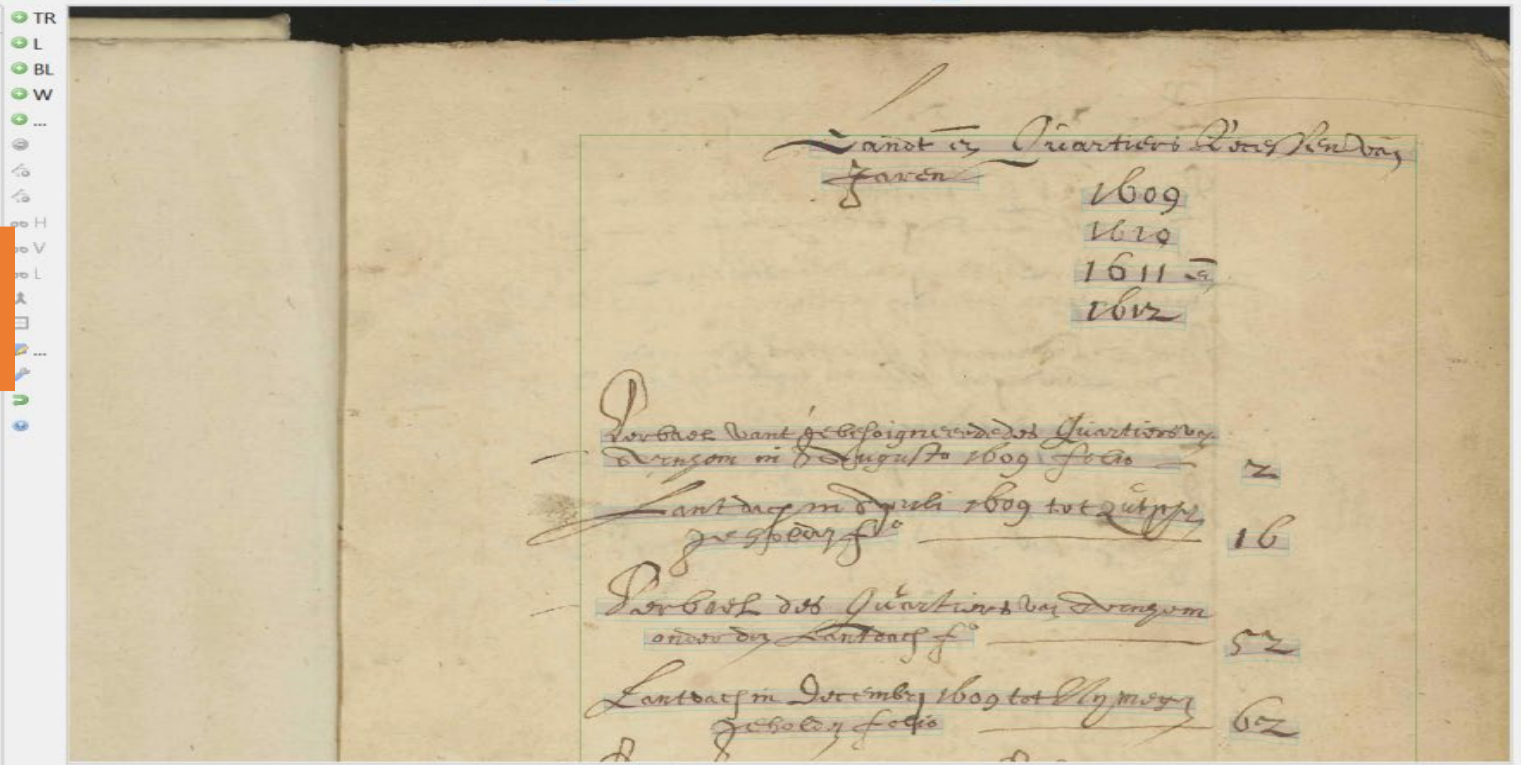
Layout Analysis
Method: CITLab Advanced Configure...
 Current page Pages (56t 1-560) ...
 Find Text Regions Only use unsegmented pages
 Find Lines in Text Regions
Run

Text Recognition
Method: HTR (CITLab HTR+ & PyLaia)
1 Models... Train... Run...

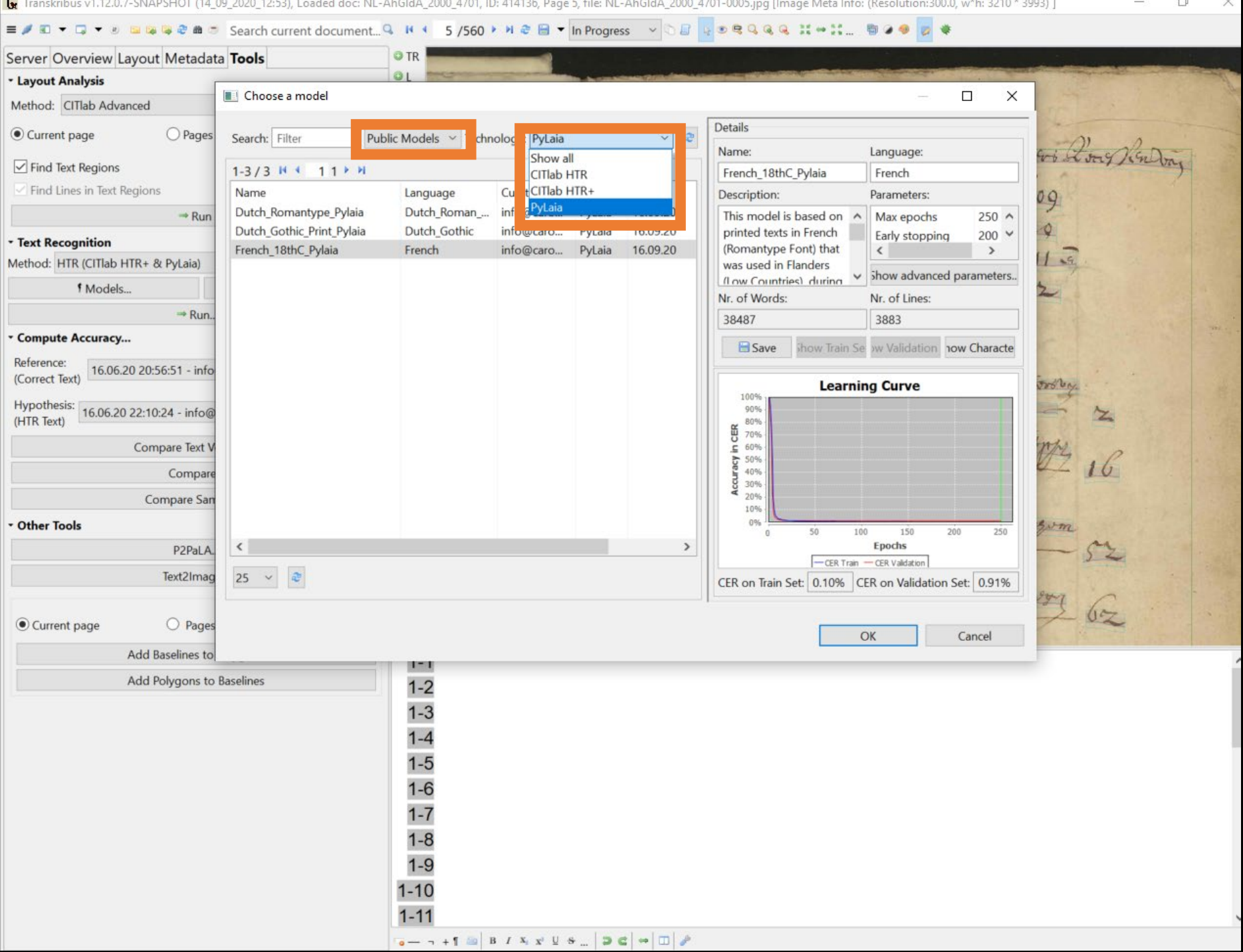
Compute Accuracy
Reference: 16.06.20 20:56:51 - info@caromein.nl - New Use curren
Hypothesis: 16.06.20 22:10:24 - info@caromein.nl - In Progress - CITLa
Compare Text Versions...
Compare...
Compare Samples...

Other Tools
P2PaLA...
Text2Image...

Current page Pages (56t 1-560) ...
Add Baselines to Polygons
Add Polygons to Baselines



- 1-1
- 1-2
- 1-3
- 1-4
- 1-5
- 1-6
- 1-7
- 1-8
- 1-9
- 1-10
- 1-11



Choose a model

Search: Filter **Public Models** chnology PyLaia

1-3 / 3

Name	Language	Custom	Created
Dutch_Romantype_Pylaia	Dutch_Roman...	info@caro...	16.09.20
Dutch_Gothic_Print_Pylaia	Dutch_Gothic	info@caro...	16.09.20
French_18thC_Pylaia	French	info@caro...	16.09.20

- PyLaia
- Show all
- CITlab HTR
- CITlab HTR+
- PyLaia

Details

Name: French_18thC_Pylaia Language: French

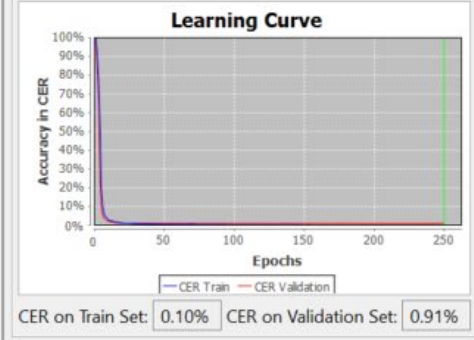
Description: This model is based on printed texts in French (Romantype Font) that was used in Flanders (low Countries) during

Parameters:

- Max epochs: 250
- Early stopping: 200

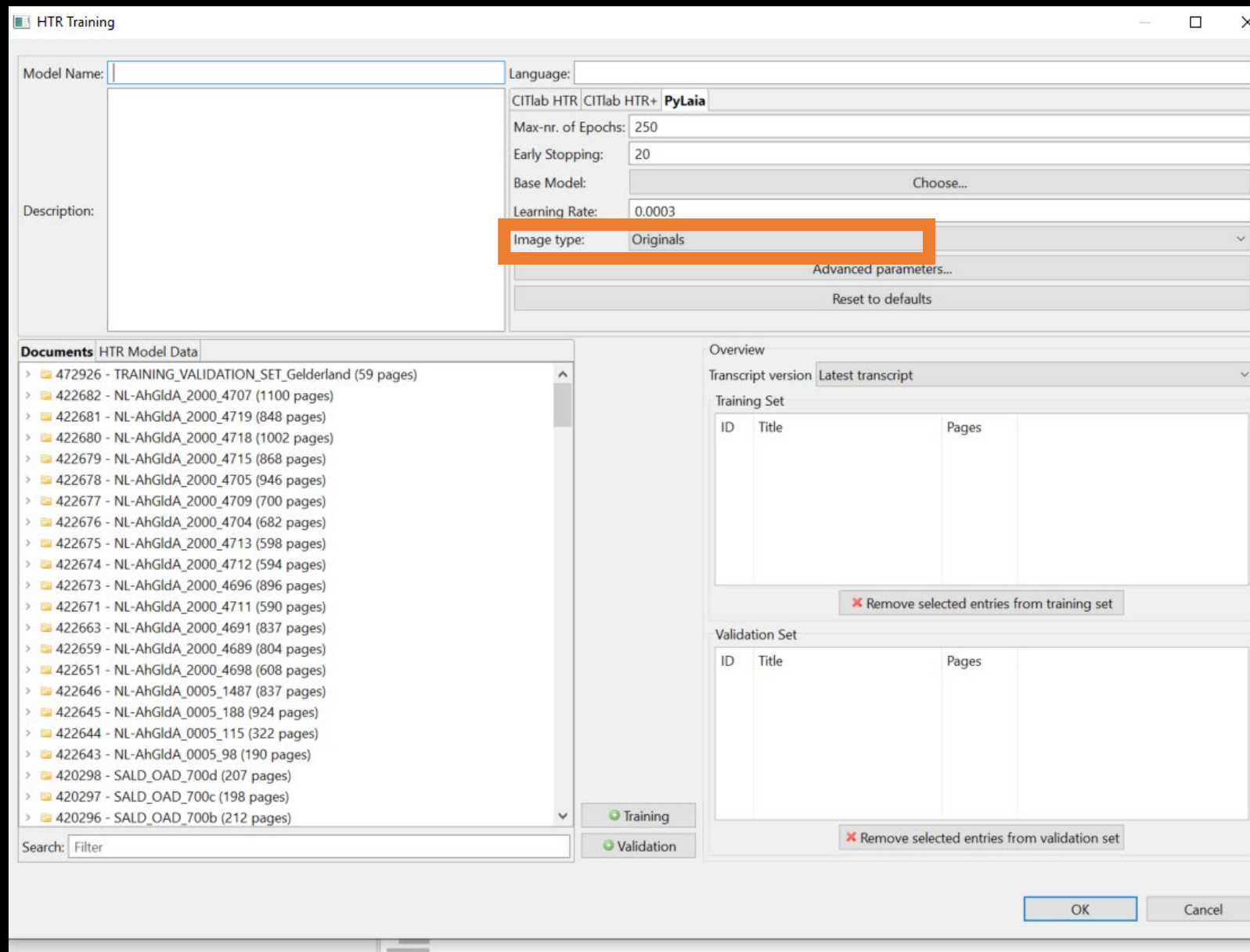
Nr. of Words: 38487 Nr. of Lines: 3883

Save Show Train Set Show Validation Show Character



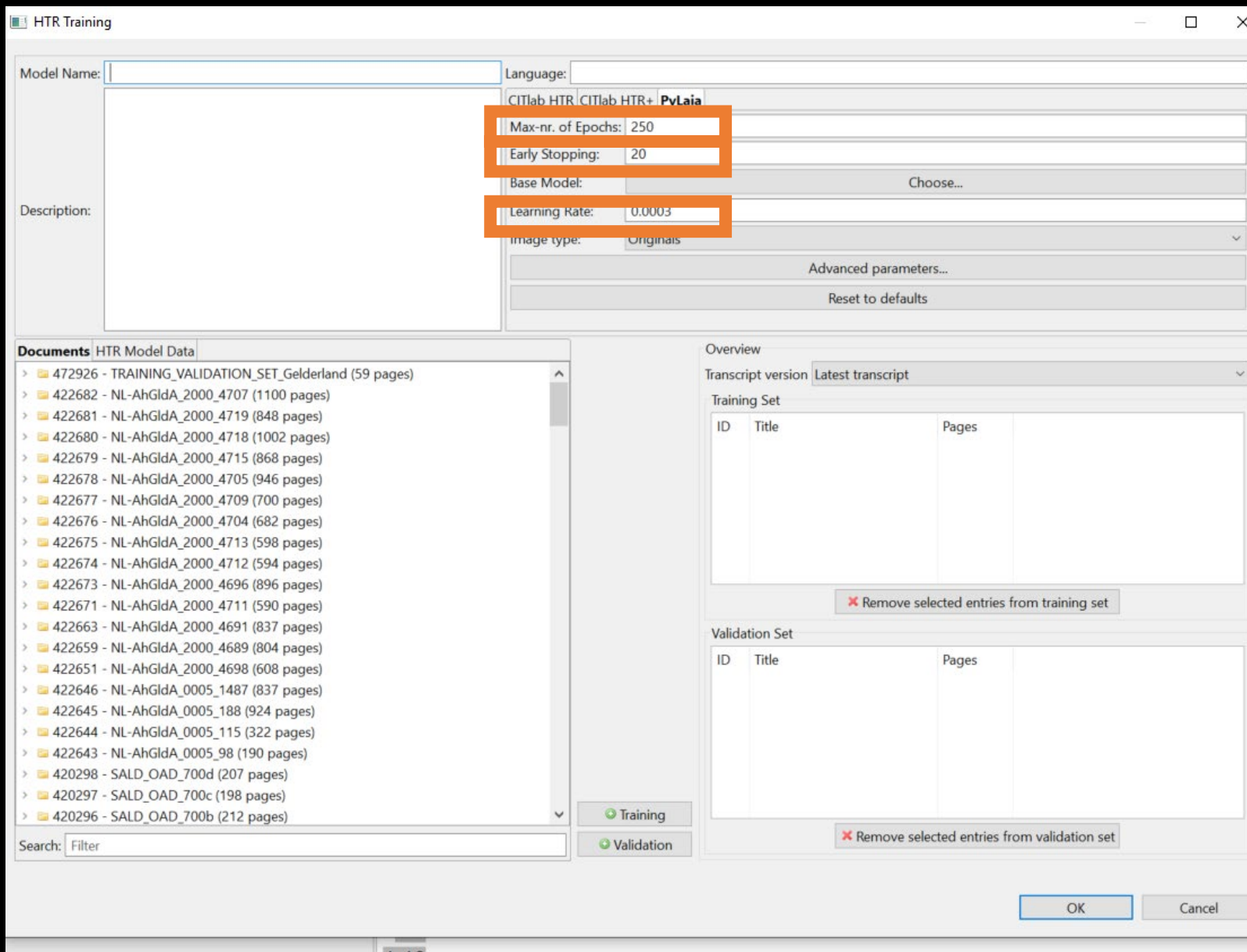
OK Cancel

- 1-1
- 1-2
- 1-3
- 1-4
- 1-5
- 1-6
- 1-7
- 1-8
- 1-9
- 1-10
- 1-11

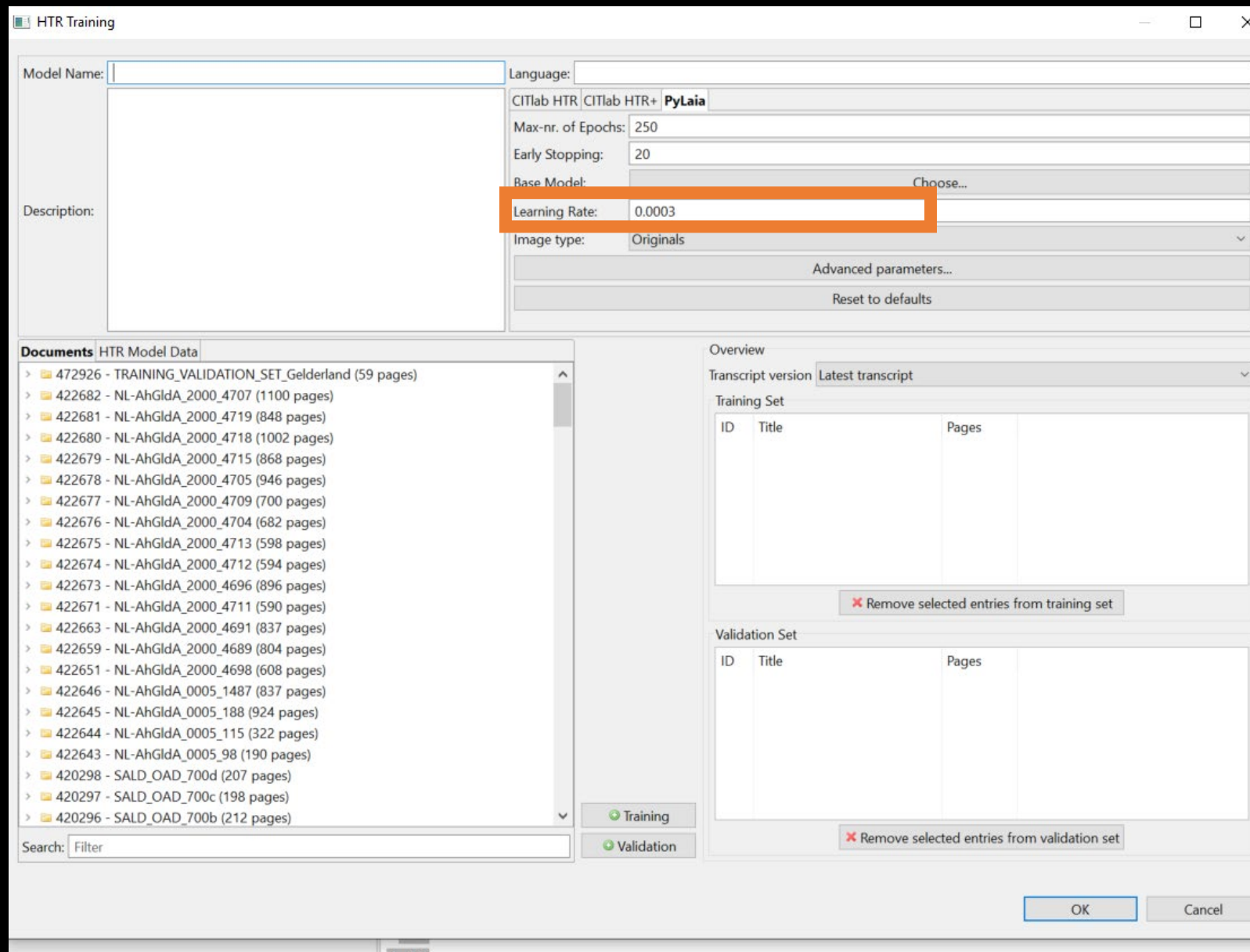


- Image type – do you want to have the model work on original or compressed?
 - If it takes too long to create, stop the training and use the compressed! (Not that much influence on the result.)

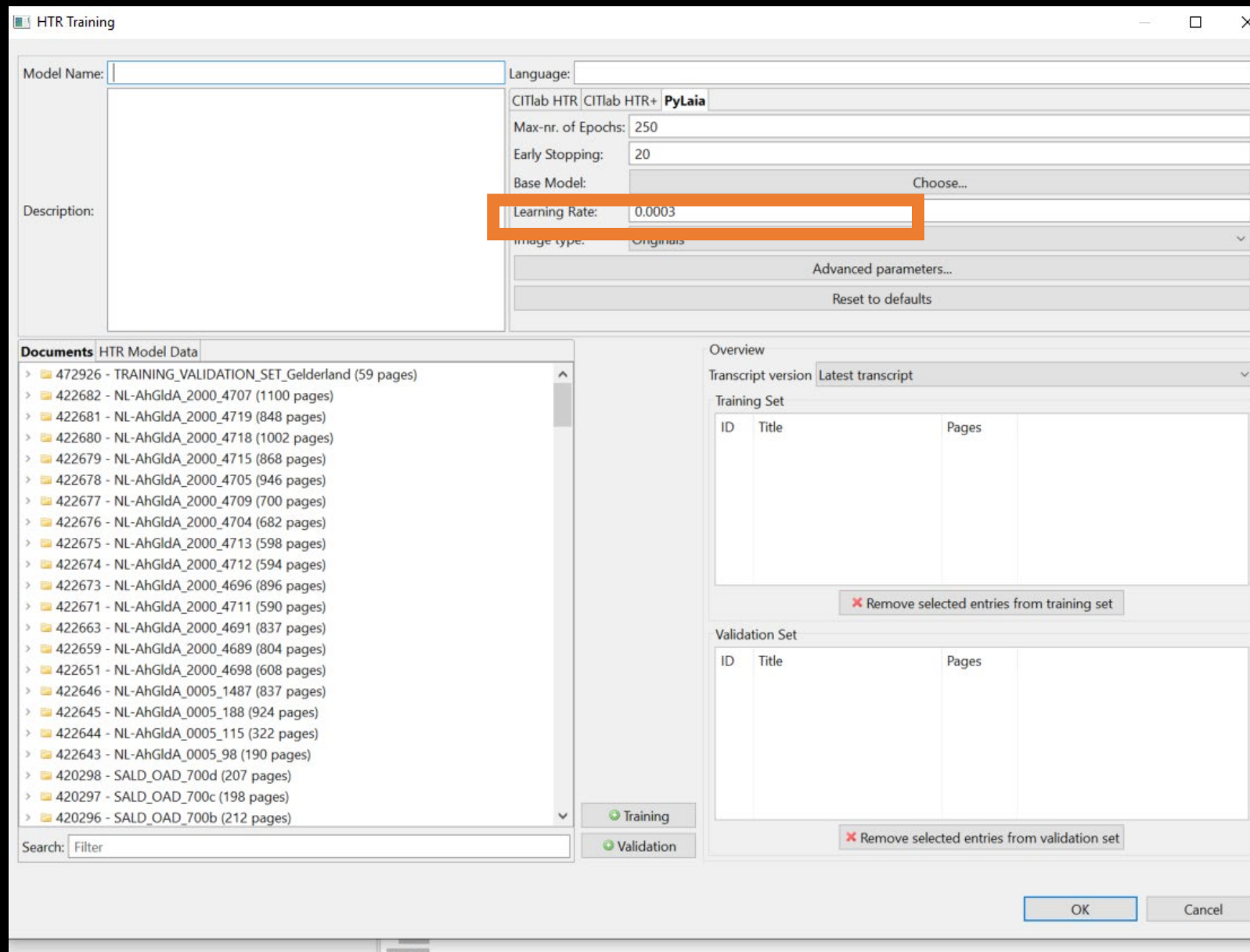
- Number of epochs (same as in HTR+)



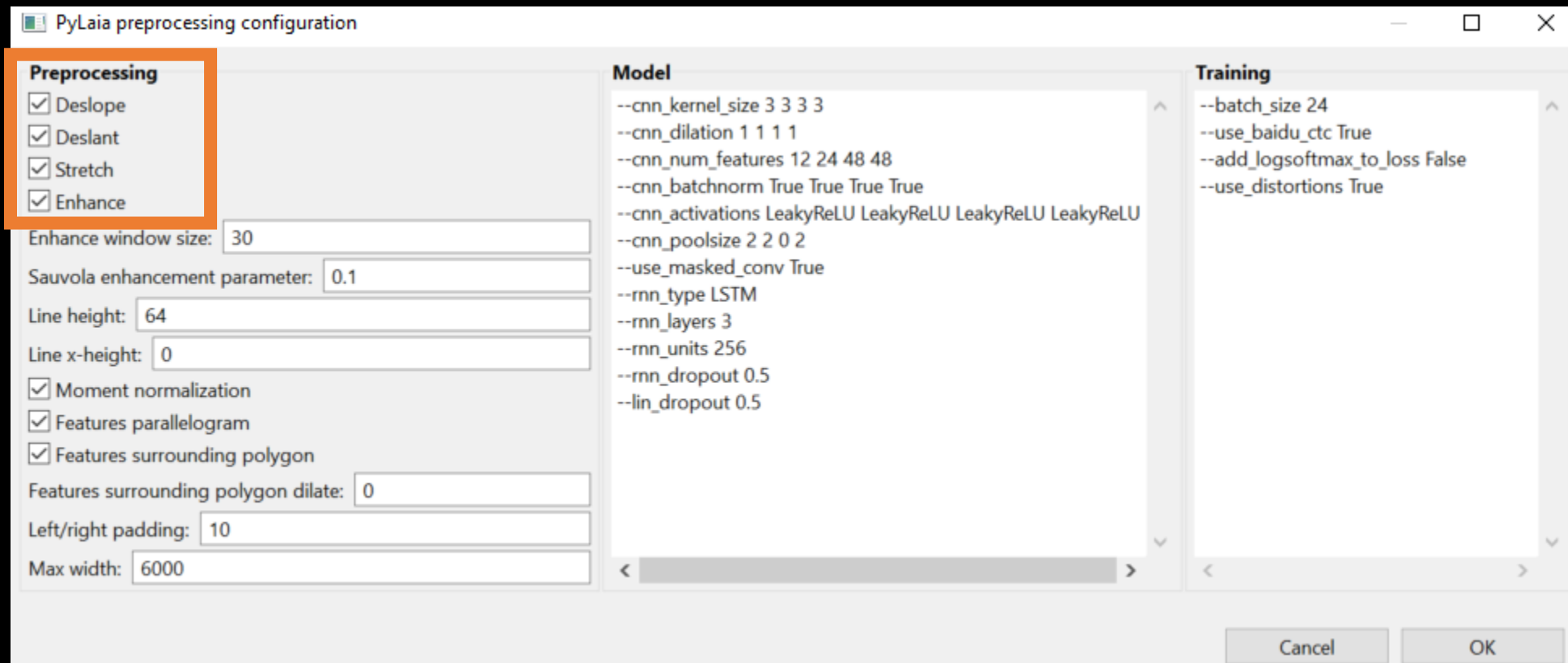
- Early stopping & learning rate combined
- → when the improvement on the validation set is too small, the system stops. (with very small validation sets: make this number a bit higher).



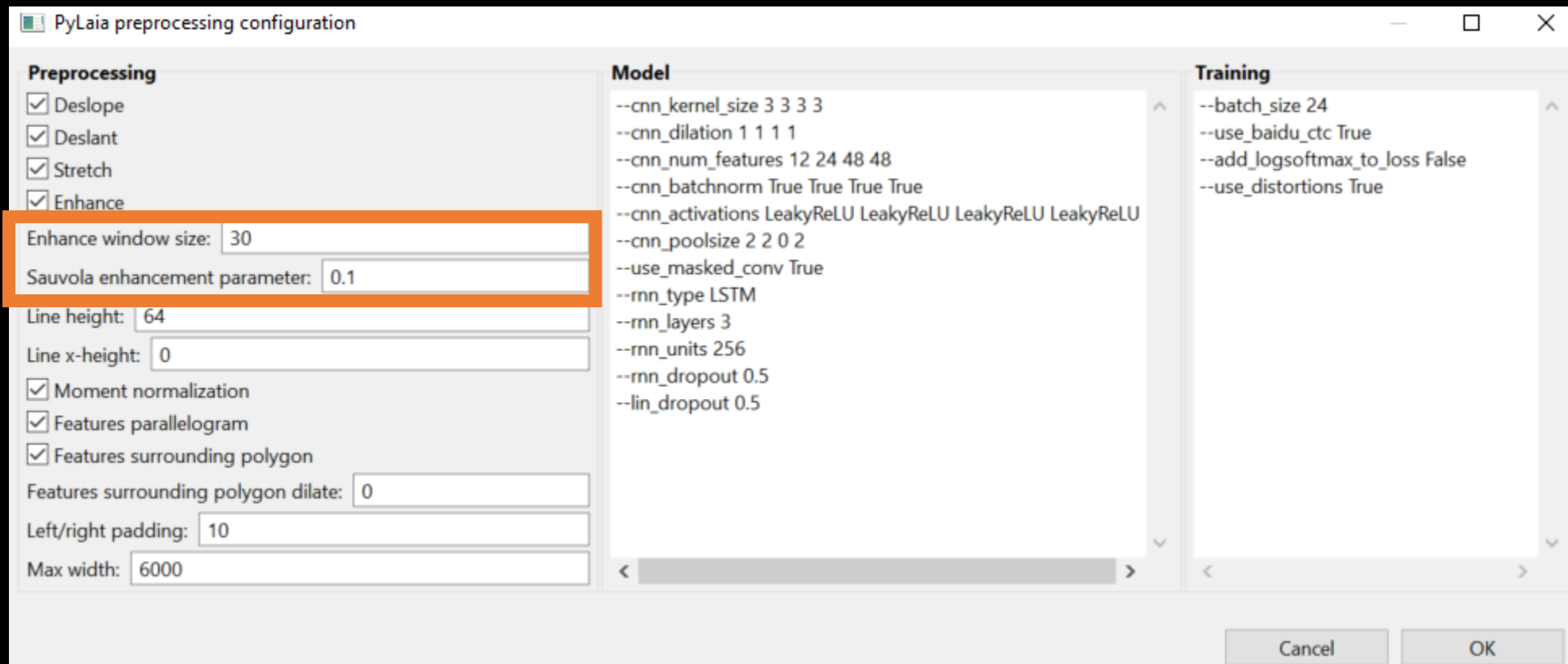
- Learning rate: the worth between each step in the training. If the steps are large, the CER will drop quicker, but is less accurate. **Leave it at default if you are not experienced.**



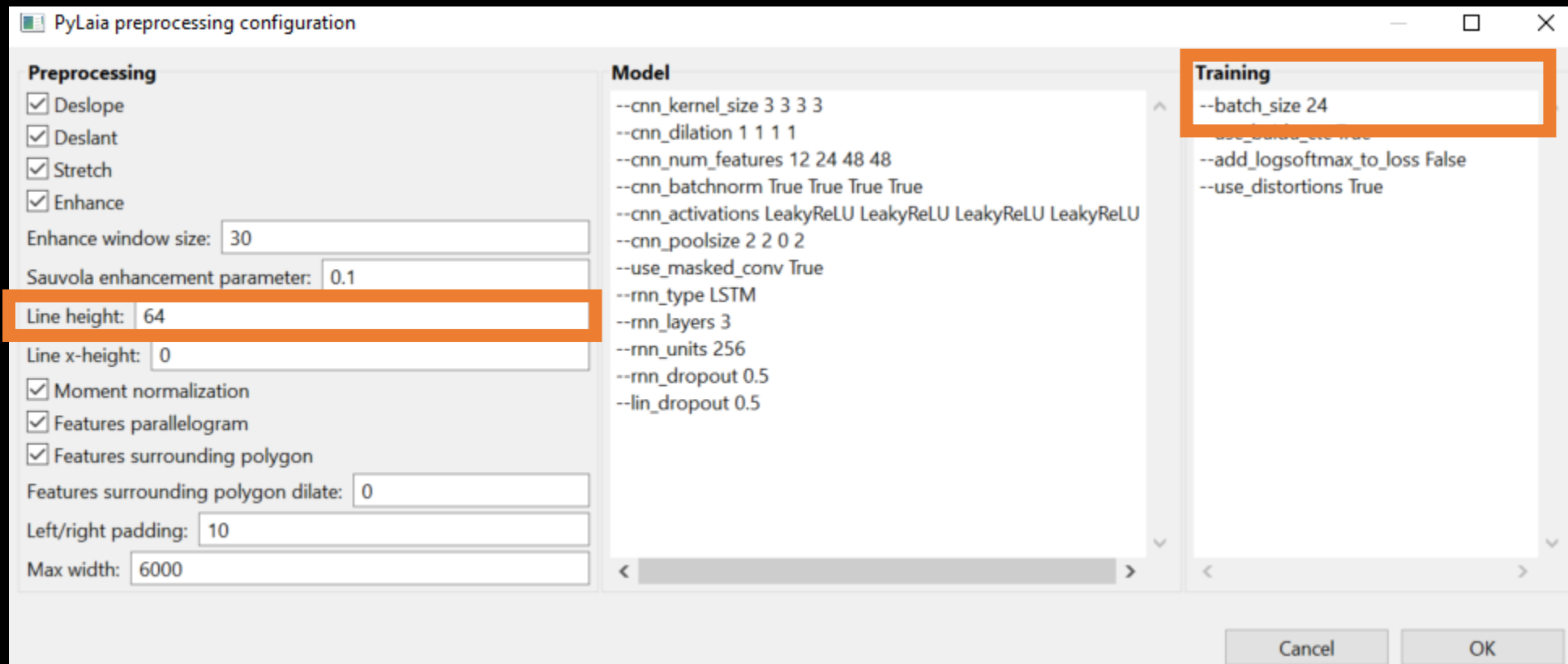
- Learning rate: the worth between each step in the training. If the steps are large, the CER will drop quicker, but is less accurate. **Leave it at default if you are not experienced.**



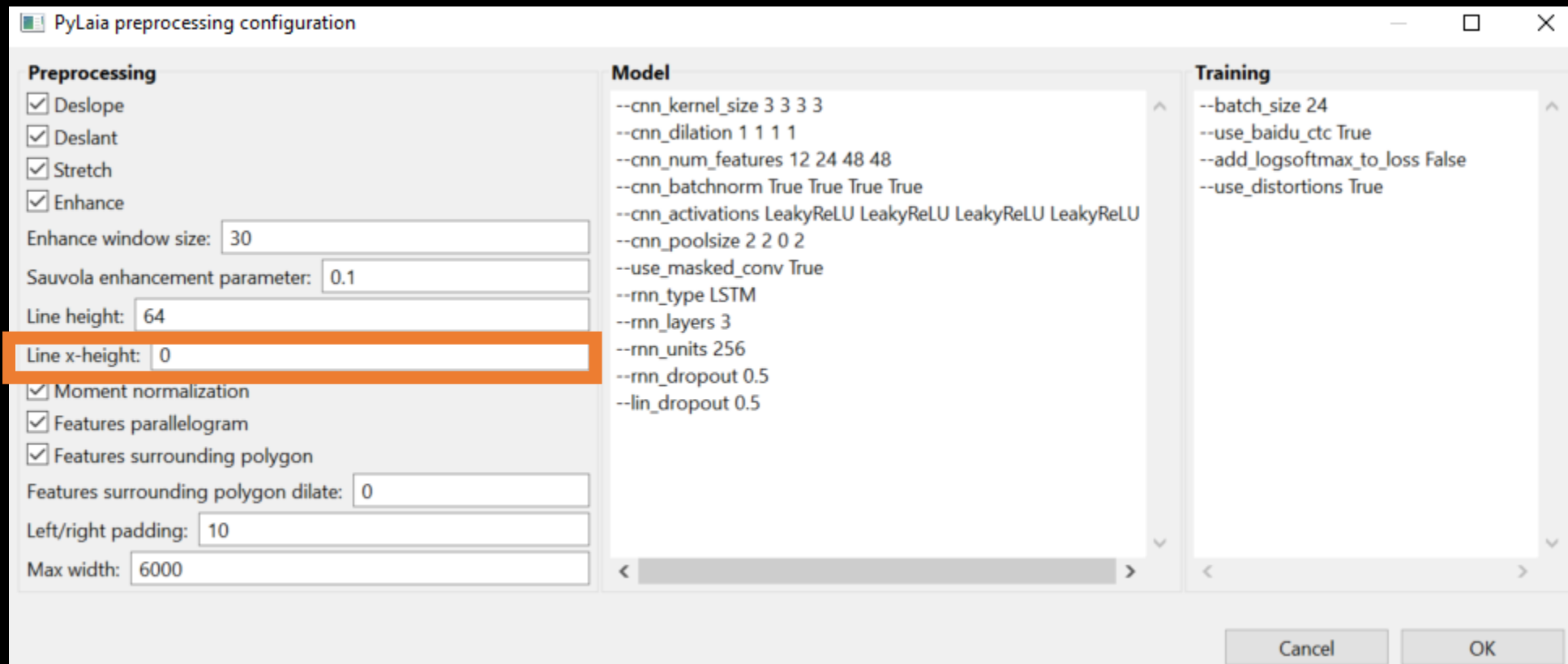
- Deslope: ✓ accept a higher variety with the baselines .
- Deslant: ✓ necessary for written texts; NOT for printed texts.
- Stretch: ✓ if texts are written extremely tight to one another
- Enhance: ✓ if there is a lot of 'noise' on the page (not with very white pages e.g.)



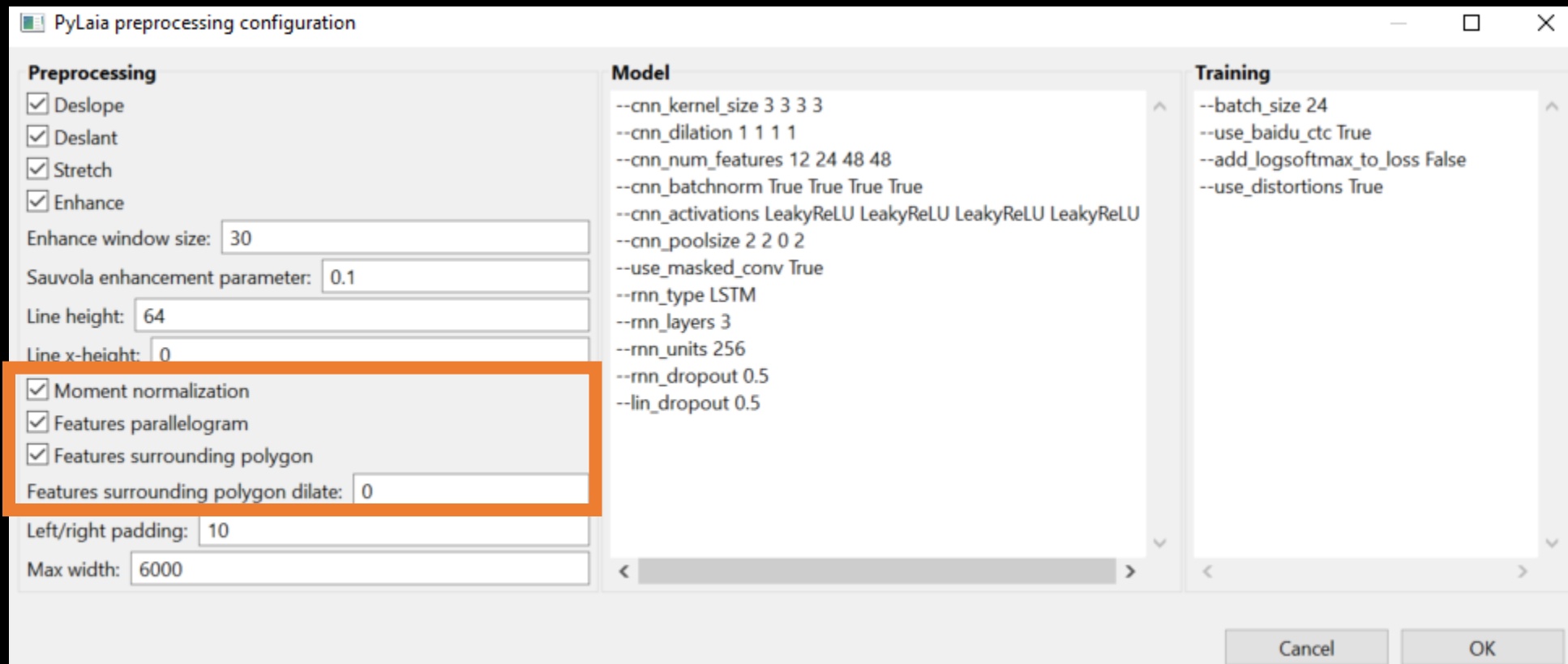
- Enhance window size: the size of the “optimizing tool” that goes over the pages.
- Sauvola enhancement parameter: ✘ don’t touch, has to do with special algorithms.



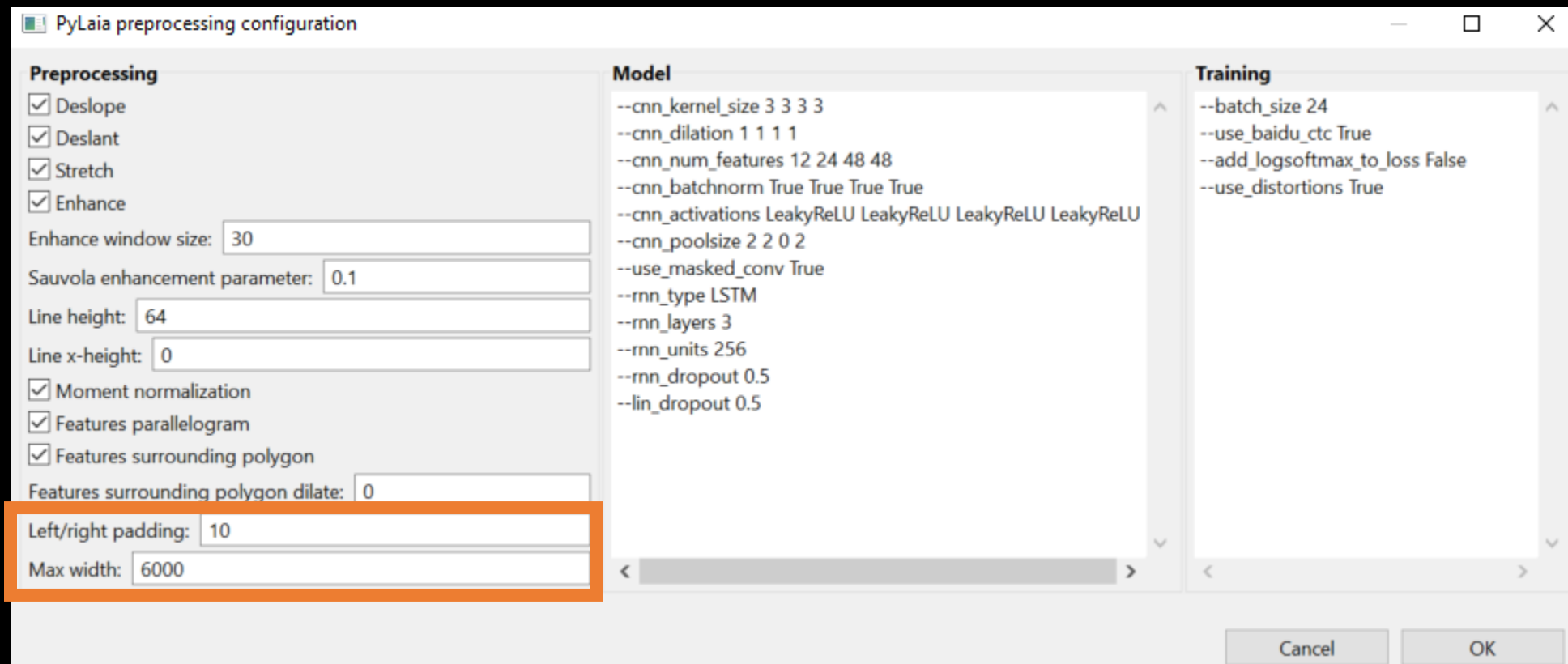
- Line height: the height of the text measured in pixels. If it is not high enough, change it to 100.
- If you get an ‘out of memory order’ you may change the “batch size” to a lower number. The smaller this number is, the slower the training becomes.
In a next version this will be changed into an automatic batch-size.



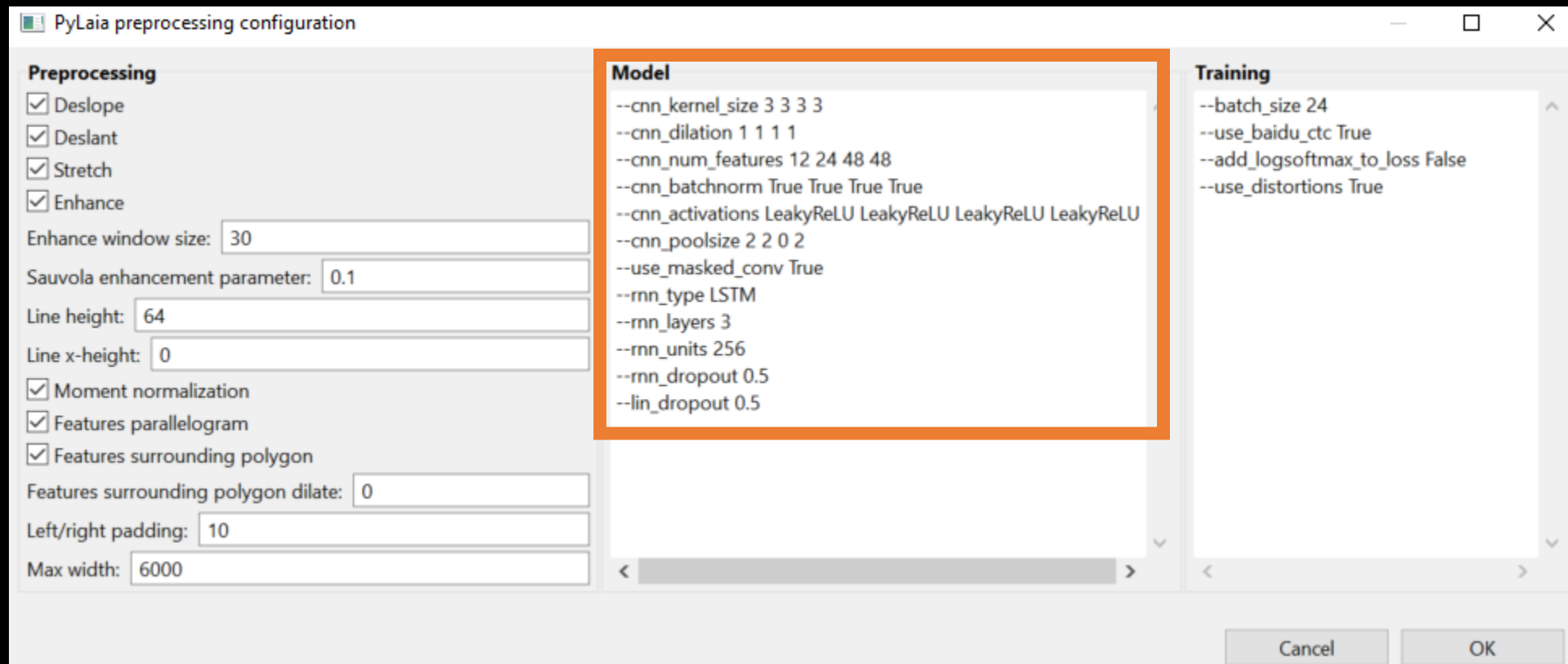
- Line x-height: this concerns descenders and ascenders. If you chose to fill this one in, the Line-height parameter is ignored.



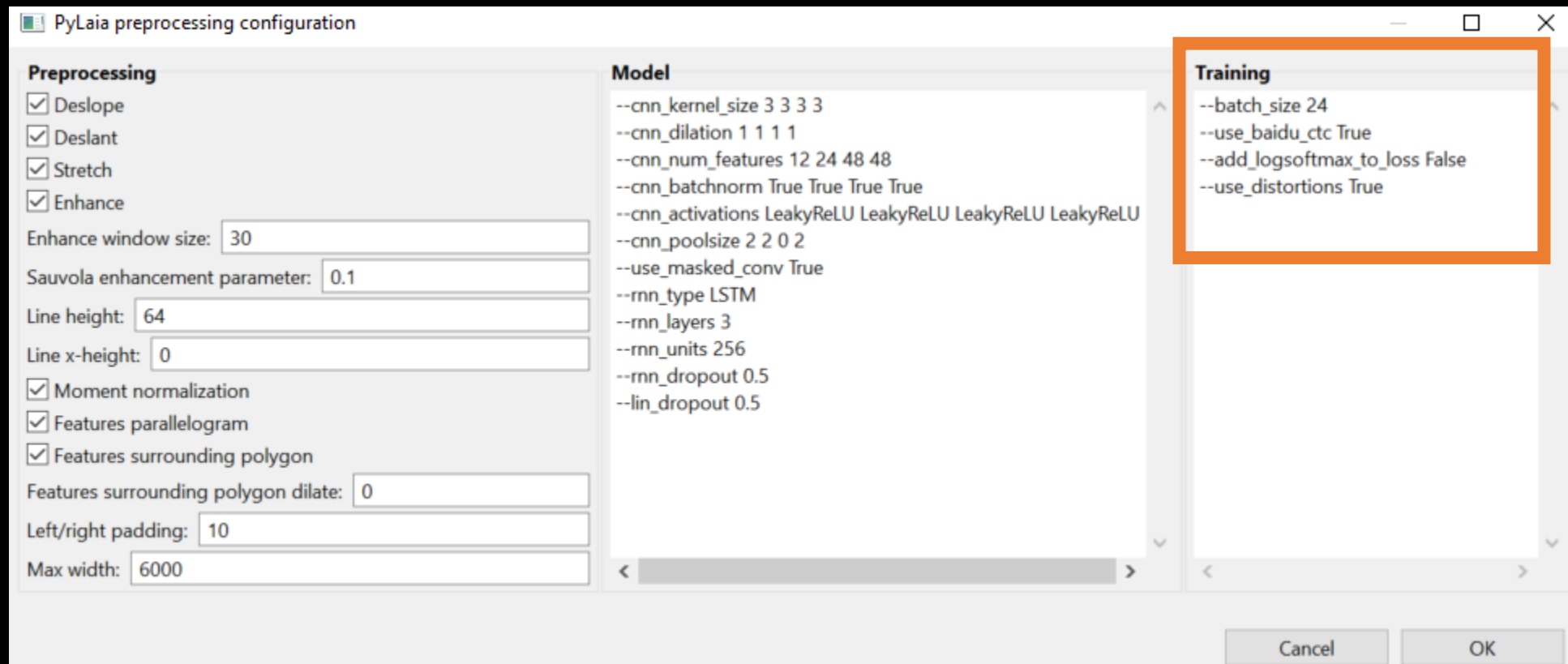
- Moment normalization: ✘ don't touch (leave the ✓ there)
- Features parallelogram: ✘ don't touch (leave the ✓ there)
- Features surrounding polygon: ✘ don't touch (leave the ✓ there)
- Features surrounding polygon dilate: ✘ don't touch (leave the ✓ there)



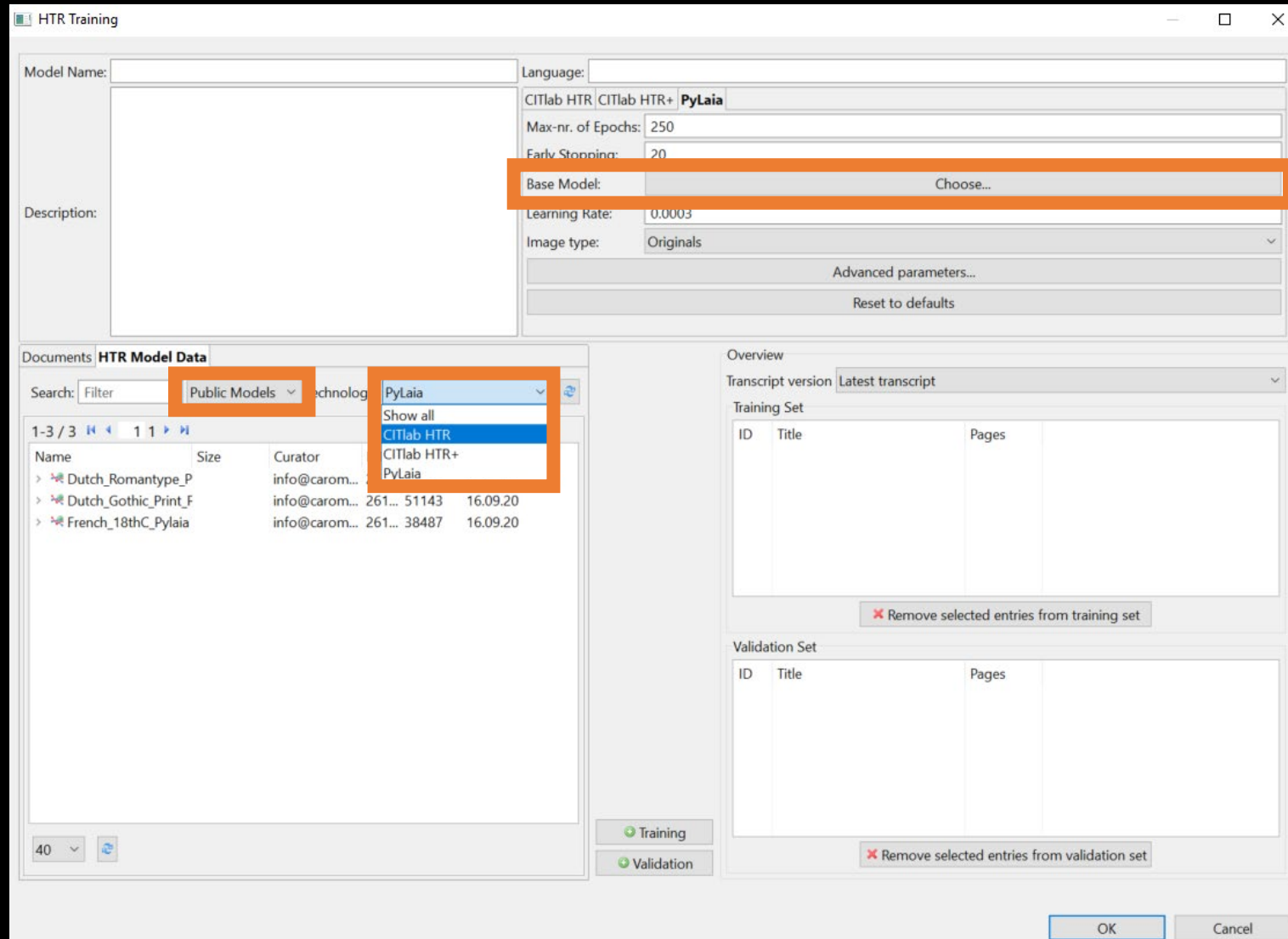
- Left/ right padding: the number 10 here means ‘10 pixels’ to prevent the risk of cutting a part of the row.
- Max width: 6000 is default (pixels). If you have huge pages, you will need to adjust this to a higher number, otherwise you don’t need to touch this.



- Model: all the parameters here are meant for people who know their way around with machine learning. It has to do with modifications to the Neural Networks.



- Batch size: number of pages that are being processed at once at the GPU (Graphic Processing Unit aka: the core in the server).
- Use_distortions: “True” means that the computer will rotate or change the shape and position of the trainingsset to make the model more stable.
 - Not necessary for printed and very regularly written texts and really good quality scans. You can then change this statement from ‘True’ by typing ‘False’ there.



- Pylaia only works with Pylaia models as a base (as does HTR+ with HTR+ models)

Model Name: Language:

CITlab HTR CITlab HTR+ **PyLaia**

Max-nr. of Epochs: 250

Early Stopping: 20

Base Model:

Learning Rate: 0.0003

Image type: Originals

Document: **HTR Model Data**

Search:

1-3 / 3

Name	Size	Curator	HT...	nrOfW...	Date	
▼ Dutch_Romantype_P		in...	@carom...	261...	88105	16.09.20
> Train Set (private)	186 pages					
> Validation Set (pri 19 pages)						
> Dutch_Gothic_Print_F		info@carom...	261...	51143		16.09.20
> French_18thC_Pylaia		info@carom...	261...	38487		16.09.20

40

Overview

Training Set

ID	Title	Pages
----	-------	-------

Validation Set

ID	Title	Pages
----	-------	-------

- TR
- L
- BL
- W
- ...
- H
- V
- L
- ...
- ...
- ...
- ...
- ...

Landt & Quartiers Lontzen
 jaren

1609
 1610
 1611
 1612

Verbaer vant geboignen van des Quartiers by
 Dronson in August 1609 f. 10

12

Landt by in July 1609 tot gelycke
 gespeel f. 10

16

Verbaer des Quartiers by Dronson
 ander by Landt f. 10

52

Landt by in Decemby 1609 tot gelycke
 gespeel f. 10

62

Van de Quartiers van den
Jaren

1609

1610

1611

1612

De hooft van de bevoignen van de Quartiers van
Drensem in den August 1609 f. 12

Lantdag in den Juli 1609 tot gelycke
gespeel f. 16

De hooft van de Quartiers van Drensem
ander den Lantdag f. 52

Lantdag in Decemby 1609 tot gelycke
gespeel f. 62

Remove Small regions

- If there is a lot of noise on your pages (because of stains or discolourations).

Server Overview Layout Metadata Tools

Layout Analysis

Method: CITLab Advanced Configure...

Current page Pages (561) 1-560

Find Text Regions Only use unsegmented pages

Find Lines in Text Regions

Run

Text Recognition

Method: HTR (CITLab HTR+ & PyLaia)

Models... Train...

Run...

Compute Accuracy...

Reference: 16.06.20 20:56:51 - info@caromein.nl - New Use current

Hypothesis: 16.06.20 22:10:24 - info@caromein.nl - In Progress - CITLab

Compare Text Versions...

Compare...

Compare Samples...

Other Tools

P2PaLA...

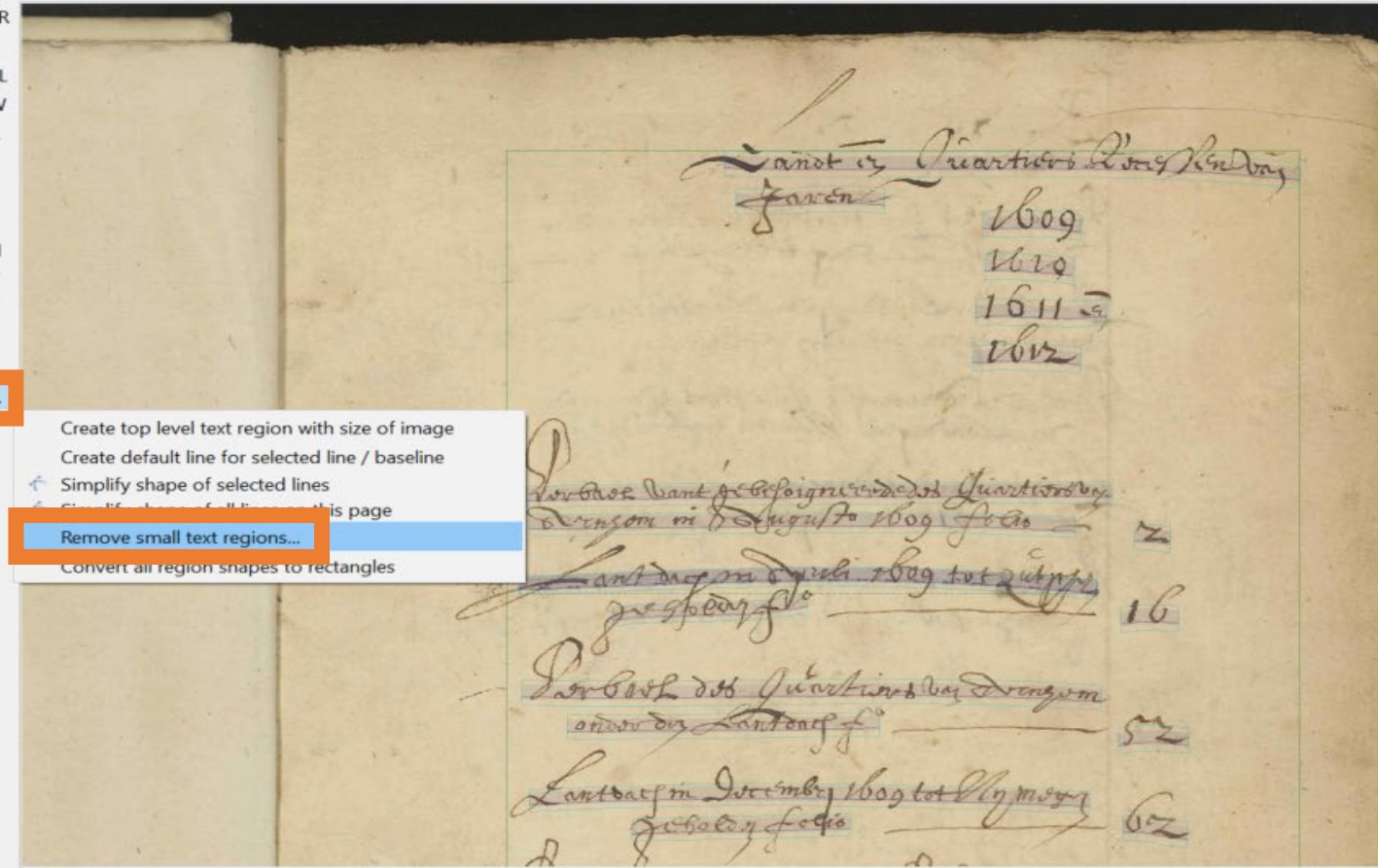
Text2Image...

Current page Pages (561) 1-560

Add Baselines to Polygons

Add Polygons to Baselines

- TR
- L
- BL
- W
- ...
- H
- V
- L



- Create top level text region with size of image
- Create default line for selected line / baseline
- Simplify shape of selected lines
- Simplify shape of all lines on this page
- Remove small text regions...**
- Convert all region shapes to rectangles

- 1-1
- 1-2
- 1-3
- 1-4
- 1-5
- 1-6
- 1-7
- 1-8
- 1-9
- 1-10**
- 1-11

Vandert de Quartiers van den
Jaren

1609
1610
1611
1612

Filter small text regions ✕

Current page Pages (560): 1-560 ...

Threshold percentage of image size: 3.05 ▼

Dry run

Do not save pages. Use to determine how many regions would be removed with a certain threshold.

... van de befoingene van den Quartiers van
in den Auguste 1609 f. 60

... van den 1609 tot den
1612 f. 61

... van den Quartiers van den
in den 1612 f. 62

... van den 1612 tot den
1613 f. 63

Create a sample set

- Why?
 - Because you can create a representative set from a whole collection to transcribe and make that into a useful model for your collection.

Server Overview Layout Metadata Tools

Logout info@caromein.nl

Document... Find

Document Manager User Manager

Versions Add pages, add transcripts, choose symbolic images, ...

Recent Documents... User activity

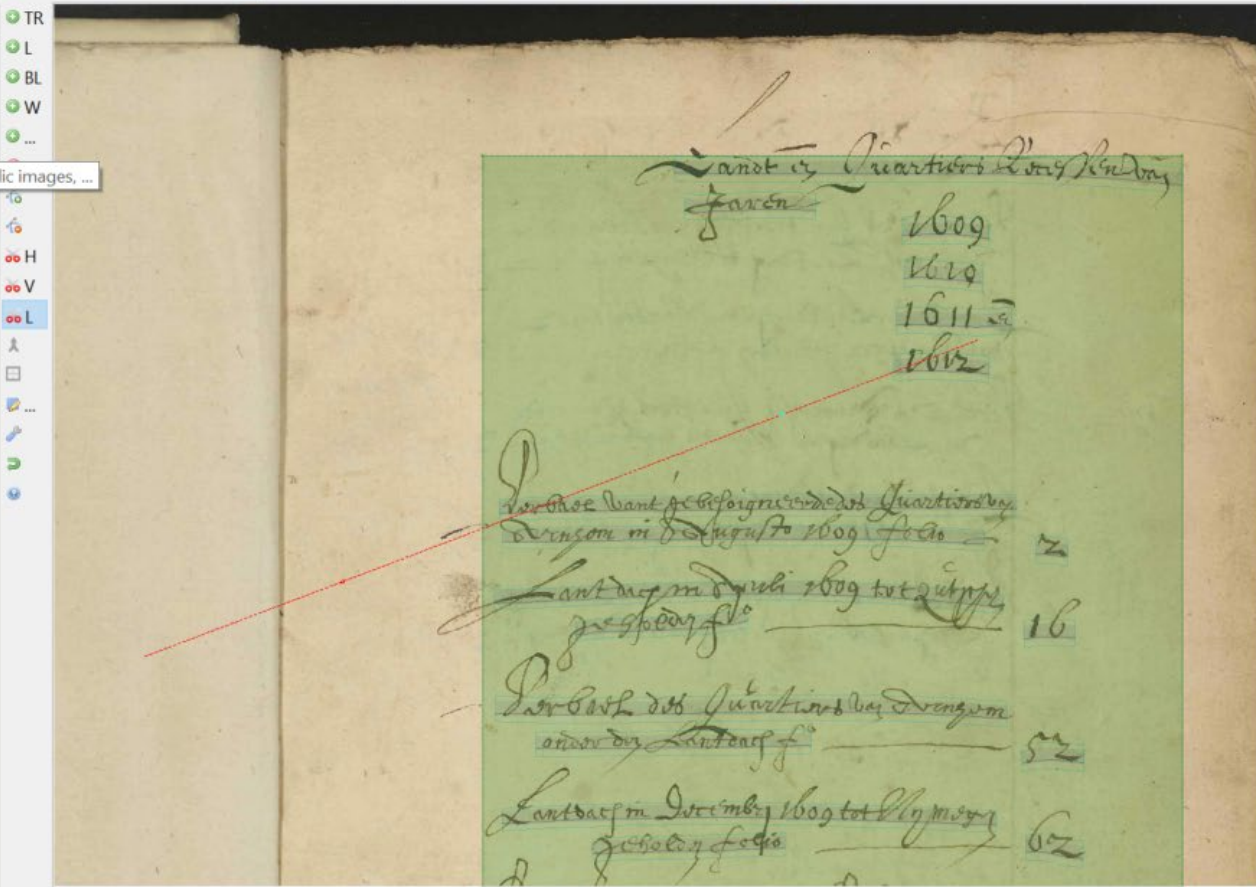
Collections: Gelderland (62362, Owner) Co-ID

Documents HTR Model Data

1-101 / 204 1 3

ID	Title	Pa...	Uploader	Uploaded
42...	SALD_OAD_700c	198	info@car...	Thu Jun ...
42...	SALD_OAD_700b	212	info@car...	Thu Jun ...
41...	SALD_OAD_700e	167	info@car...	Thu Jun ...
41...	SALD_OAD_700f	155	info@car...	Thu Jun ...
41...	SALD_OAD_700g	230	info@car...	Thu Jun ...
41...	SALD_OAD_701	129	info@car...	Thu Jun ...
41...	SALD_OAD_702	181	info@car...	Thu Jun ...
41...	SALD_OAD_1405	201	info@car...	Thu Jun ...
41...	SALD_OAD_1406	52	info@car...	Thu Jun ...
41...	TRAINING_VALIDATION_...	1	info@car...	Mon Jun ...
41...	NL-AhGldA_2000_4720	10...	info@car...	Tue Jun 1...
41...	NL-AhGldA_2000_4716	996	info@car...	Tue Jun 1...
41...	NL-AhGldA_2000_4708	10...	info@car...	Tue Jun 1...
41...	NL-AhGldA_2000_4717	956	info@car...	Tue Jun 1...
41...	NL-AhGldA_2000_4714	686	info@car...	Tue Jun 1...
41...	NL-AhGldA_2000_4710	618	info@car...	Tue Jun 1...
41...	NL-AhGldA_2000_4706	10...	info@car...	Tue Jun 1...
41...	NL-AhGldA_2000_4700	798	info@car...	Tue Jun 1...
41...	NL-AhGldA_2000_4701	560	info@ca...	Tue Jun ...
41...	NL-AhGldA_2000_4699	682	info@car...	Tue Jun 1...
41...	NL-AhGldA_2000_456	308	info@car...	Tue Jun 1...
41...	NL-AhGldA_0005_102	172	info@car...	Tue Jun 1...
41...	TRAINING_VALIDATION_...	6	info@car...	Sun Jun ...
40...	SALD_OAD_17b	354	info@car...	Mon Jun ...
40...	SALD_OAD_700a	167	info@car...	Mon Jun ...
40...	NL-AhGldA_2000_4692	738	info@car...	Sun Jun ...
40...	SALD_OAD_17a	403	info@car...	Mon Jun ...
40...	SALD_OAD_3	353	info@car...	Mon Jun ...
40...	SALD_OAD_2	347	info@car...	Mon Jun ...
40...	SALD_OAD_13	252	info@car...	Mon Jun ...
40...	SALD_OAD_16	223	info@car...	Mon Jun ...

100 Filter



- 1-1
- 1-2
- 1-3
- 1-4
- 1-5
- 1-6
- 1-7
- 1-8
- 1-9
- 1-10
- 1-11

Server Overview Layout Metadata Tools

Logout info@caromein.nl

Document... Find

Document Manager User Manager

Versions

Recent Documents...

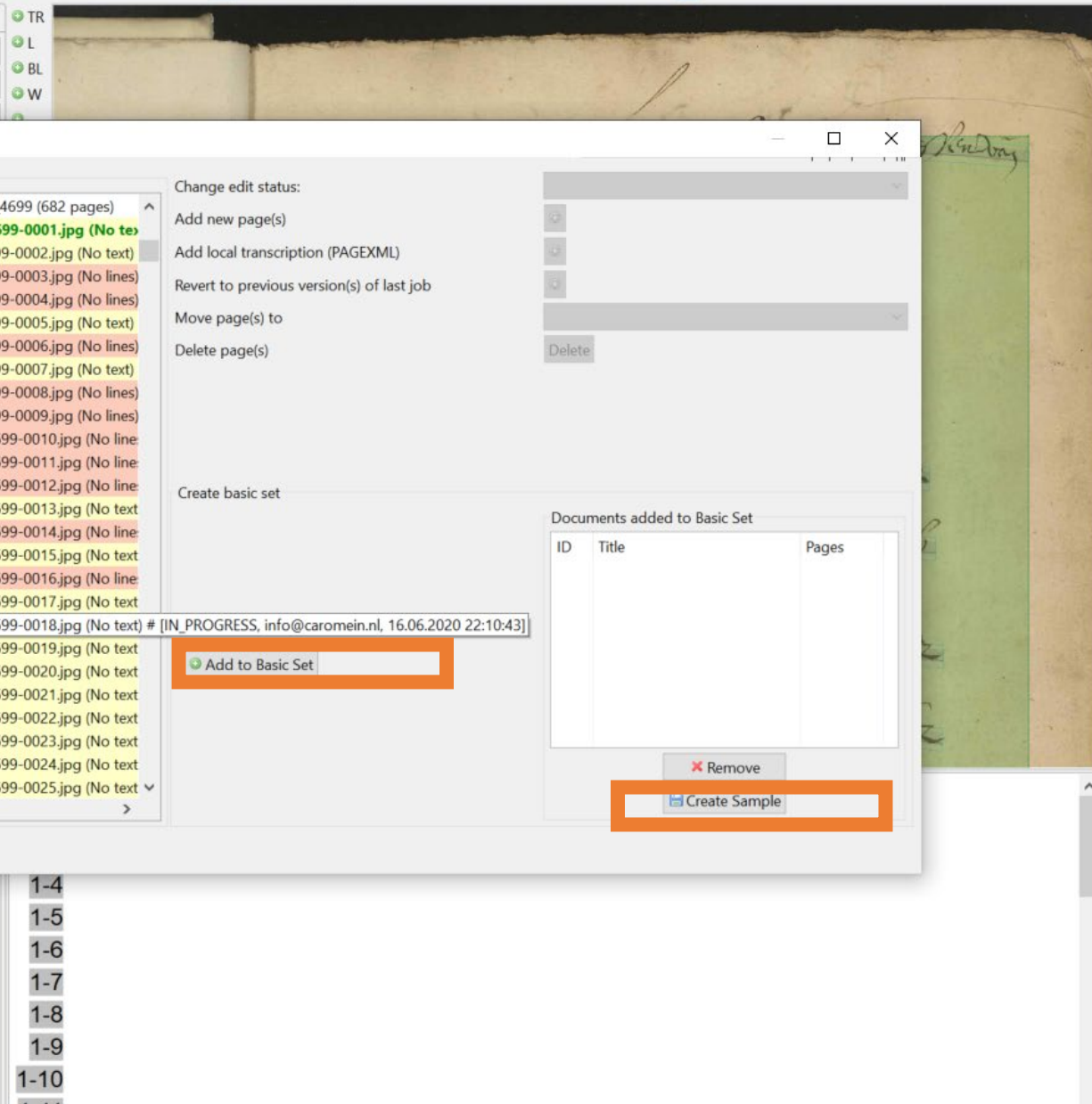
Collections: Gelderland

Documents HTR Model Data

1-101 / 204 1 3

ID	Title
42...	SALD_OAD_700c
42...	SALD_OAD_700b
41...	SALD_OAD_700e
41...	SALD_OAD_700f
41...	SALD_OAD_700g
41...	SALD_OAD_701
41...	SALD_OAD_702
41...	SALD_OAD_1405
41...	SALD_OAD_1406
41...	TRAINING_VALIDATION_...
41...	NL-AhGIdA_2000_4720
41...	NL-AhGIdA_2000_4716
41...	NL-AhGIdA_2000_4708
41...	NL-AhGIdA_2000_4717
41...	NL-AhGIdA_2000_4714
41...	NL-AhGIdA_2000_4710
41...	NL-AhGIdA_2000_4706
41...	NL-AhGIdA_2000_4700
41...	NL-AhGIdA_2000_4701
41...	NL-AhGIdA_2000_4699
41...	NL-AhGIdA_2000_456
41...	NL-AhGIdA_0005_102
41...	TRAINING_VALIDATION_...
40...	SALD_OAD_17b
40...	SALD_OAD_700a
40...	NL-AhGIdA_2000_4692
40...	SALD_OAD_17a
40...	SALD_OAD_3
40...	SALD_OAD_2
40...	SALD_OAD_13
40...	SALD_OAD_16

100 Filter



Document Manager

Documents in current Collection

- 414135 - NL-AhGIdA_2000_4699 (682 pages)
- (1) NL-AhGIdA_2000_4699-0001.jpg (No text)
- (2) NL-AhGIdA_2000_4699-0002.jpg (No text)
- (3) NL-AhGIdA_2000_4699-0003.jpg (No lines)
- (4) NL-AhGIdA_2000_4699-0004.jpg (No lines)
- (5) NL-AhGIdA_2000_4699-0005.jpg (No text)
- (6) NL-AhGIdA_2000_4699-0006.jpg (No lines)
- (7) NL-AhGIdA_2000_4699-0007.jpg (No text)
- (8) NL-AhGIdA_2000_4699-0008.jpg (No lines)
- (9) NL-AhGIdA_2000_4699-0009.jpg (No lines)
- (10) NL-AhGIdA_2000_4699-0010.jpg (No line)
- (11) NL-AhGIdA_2000_4699-0011.jpg (No line)
- (12) NL-AhGIdA_2000_4699-0012.jpg (No line)
- (13) NL-AhGIdA_2000_4699-0013.jpg (No text)
- (14) NL-AhGIdA_2000_4699-0014.jpg (No line)
- (15) NL-AhGIdA_2000_4699-0015.jpg (No text)
- (16) NL-AhGIdA_2000_4699-0016.jpg (No line)
- (17) NL-AhGIdA_2000_4699-0017.jpg (No text)
- (18) NL-AhGIdA_2000_4699-0018.jpg (No text) # [IN_PROGRESS, info@caromein.nl, 16.06.2020 22:10:43]
- (19) NL-AhGIdA_2000_4699-0019.jpg (No text)
- (20) NL-AhGIdA_2000_4699-0020.jpg (No text)
- (21) NL-AhGIdA_2000_4699-0021.jpg (No text)
- (22) NL-AhGIdA_2000_4699-0022.jpg (No text)
- (23) NL-AhGIdA_2000_4699-0023.jpg (No text)
- (24) NL-AhGIdA_2000_4699-0024.jpg (No text)
- (25) NL-AhGIdA_2000_4699-0025.jpg (No text)

Change edit status:

Add new page(s)

Add local transcription (PAGEXML)

Revert to previous version(s) of last job

Move page(s) to

Delete page(s)

Create basic set

Documents added to Basic Set

ID	Title	Pages
----	-------	-------

Add to Basic Set

Remove

Create Sample

354	info@car...	Mon Jun ...	1-4
167	info@car...	Mon Jun ...	1-5
738	info@car...	Sun Jun ...	1-6
403	info@car...	Mon Jun ...	1-7
353	info@car...	Mon Jun ...	1-8
347	info@car...	Mon Jun ...	1-9
252	info@car...	Mon Jun ...	1-10
223	info@car...	Mon Jun ...	1-11

Server Overview Layout Metadata Tools

Logout info@caromein.nl

Document... Find

Document Manager User Manager

Versions

Recent Documents...

Collections: Gelderland

Documents HTR Model Data

1-101 / 204 1 3

ID	Title
42...	SALD_OAD_700c
42...	SALD_OAD_700b
41...	SALD_OAD_700e
41...	SALD_OAD_700f
41...	SALD_OAD_700g
41...	SALD_OAD_701
41...	SALD_OAD_702
41...	SALD_OAD_1405
41...	SALD_OAD_1406
41...	TRAINING_VALIDATION_...
41...	NL-AhGIdA_2000_4720
41...	NL-AhGIdA_2000_4716
41...	NL-AhGIdA_2000_4708
41...	NL-AhGIdA_2000_4717
41...	NL-AhGIdA_2000_4714
41...	NL-AhGIdA_2000_4710
41...	NL-AhGIdA_2000_4706
41...	NL-AhGIdA_2000_4700
41...	NL-AhGIdA_2000_4701
41...	NL-AhGIdA_2000_4699
41...	NL-AhGIdA_2000_456
41...	NL-AhGIdA_0005_102
41...	TRAINING_VALIDATION_...
40...	SALD_OAD_17b 354 info@car... Mon Jun ...
40...	SALD_OAD_700a 167 info@car... Mon Jun ...
40...	NL-AhGIdA_2000_4692 738 info@car... Sun Jun ...
40...	SALD_OAD_17a 403 info@car... Mon Jun ...
40...	SALD_OAD_3 353 info@car... Mon Jun ...
40...	SALD_OAD_2 347 info@car... Mon Jun ...
40...	SALD_OAD_13 252 info@car... Mon Jun ...
40...	SALD_OAD_16 223 info@car... Mon Jun ...

Document Manager

Documents in current Collection

- 399448 - SALD_OAD_4 (51 pages)
- (1) IMG_20200602_133228.jpg (50 lines with b...)
- (2) IMG_20200602_133233.jpg (59 lines with b...)
- (3) IMG_20200602_133250.jpg (74 lines with b...)
- (4) IMG_20200602_133256.jpg (87 lines with b...)
- (5) IMG_20200602_133300.jpg (81 lines with b...)
- (6) IMG_20200602_133304.jpg (81 lines with b...)
- (7) IMG_20200602_133305.jpg (80 lines with b...)
- (8) IMG_20200602_133310.jpg (83 lines with b...)
- (9) IMG_20200602_133310_2.jpg (82 lines with b...)
- (10) IMG_20200602_133318.jpg (92 lines with b...)
- (11) IMG_20200602_133523.jpg (112 lines with b...)
- (12) IMG_20200602_133528.jpg (84 lines with b...)
- (13) IMG_20200602_133537.jpg (99 lines with b...)
- (14) IMG_20200602_133541.jpg (78 lines with b...)
- (15) IMG_20200602_133554.jpg (92 lines with b...)
- (16) IMG_20200602_133457.jpg (81 lines with b...)
- (17) IMG_20200602_133505.jpg (80 lines with b...)
- (18) IMG_20200602_133510.jpg (83 lines with b...)
- (19) IMG_20200602_133510_2.jpg (82 lines with b...)
- (20) IMG_20200602_133518.jpg (92 lines with b...)
- (21) IMG_20200602_133523.jpg (112 lines with b...)
- (22) IMG_20200602_133528.jpg (84 lines with b...)
- (23) IMG_20200602_133537.jpg (99 lines with b...)
- (24) IMG_20200602_133541.jpg (78 lines with b...)
- (25) IMG_20200602_133554.jpg (92 lines with b...)

Change edit status:

- Add new page(s)
- Add local transcription (PAGEXML)
- Revert to previous version(s) of last job

Sample options

Option: [dropdown]

Nr of pages for each document: 4

Document name: [input]

Create

Add to Basic Set

Documents added to Basic Set

ID	Title	Pages
39...	SALD_OAD_4	1-4

Remove Create Sample

- 1-4
- 1-5
- 1-6
- 1-7
- 1-8
- 1-9
- 1-10
- 1-11

100 Filter

Sample options



Option :

Nr of pag

Random

Systematic

Documen

For each document x pages

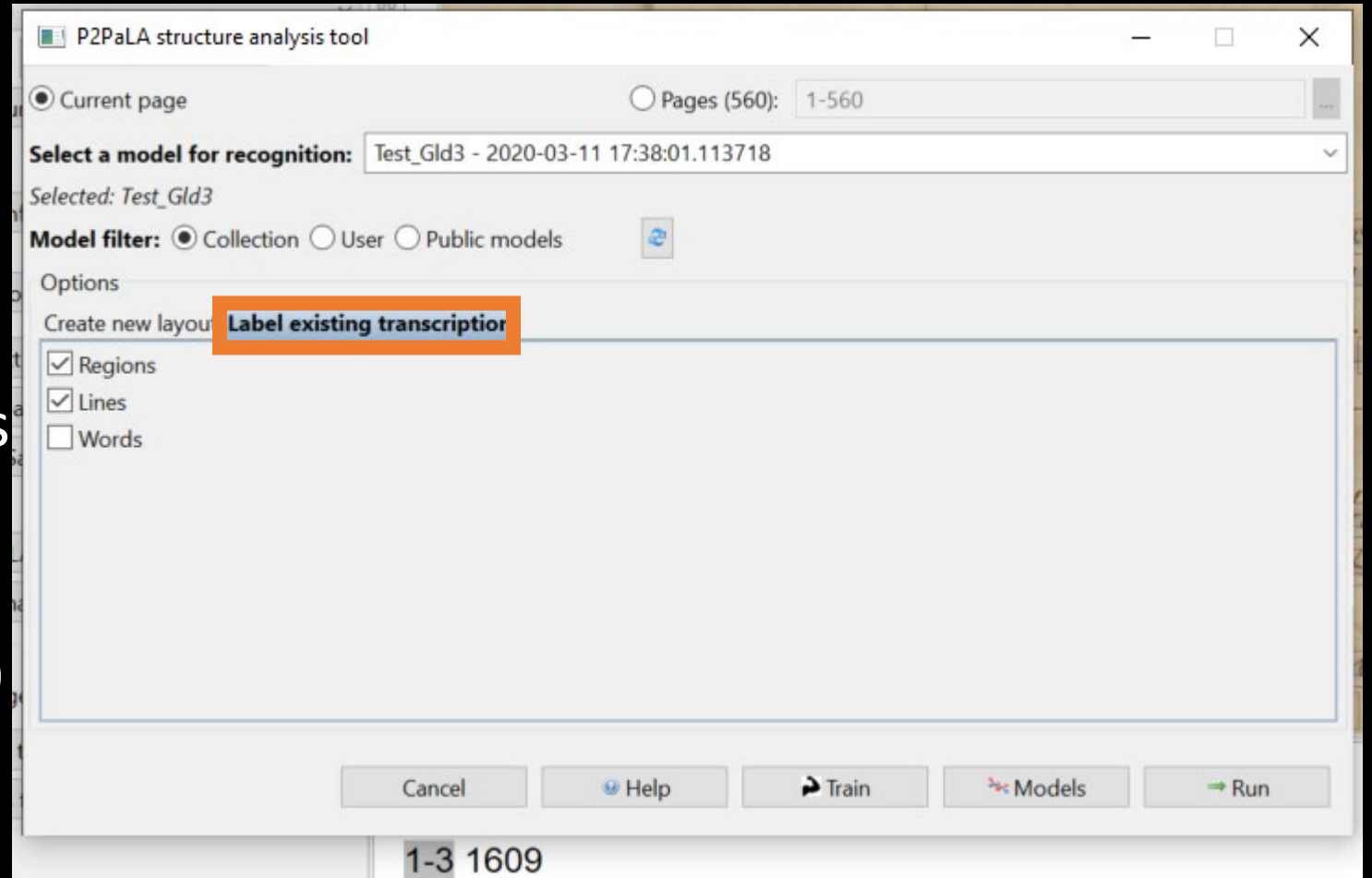
Create

Some other small updates

- P2PaLA
- Read and Search (kws)
- Little bit on the webversion
- Masking text

P2PaLA

- “Label existing transcription”
aka: rename the regions
- P2PaLA/ text regions that are labelled can (in the very near future) be used to apply a model just to certain fields and not on others if you want. (E.g. useful with multiple languages/translations.)

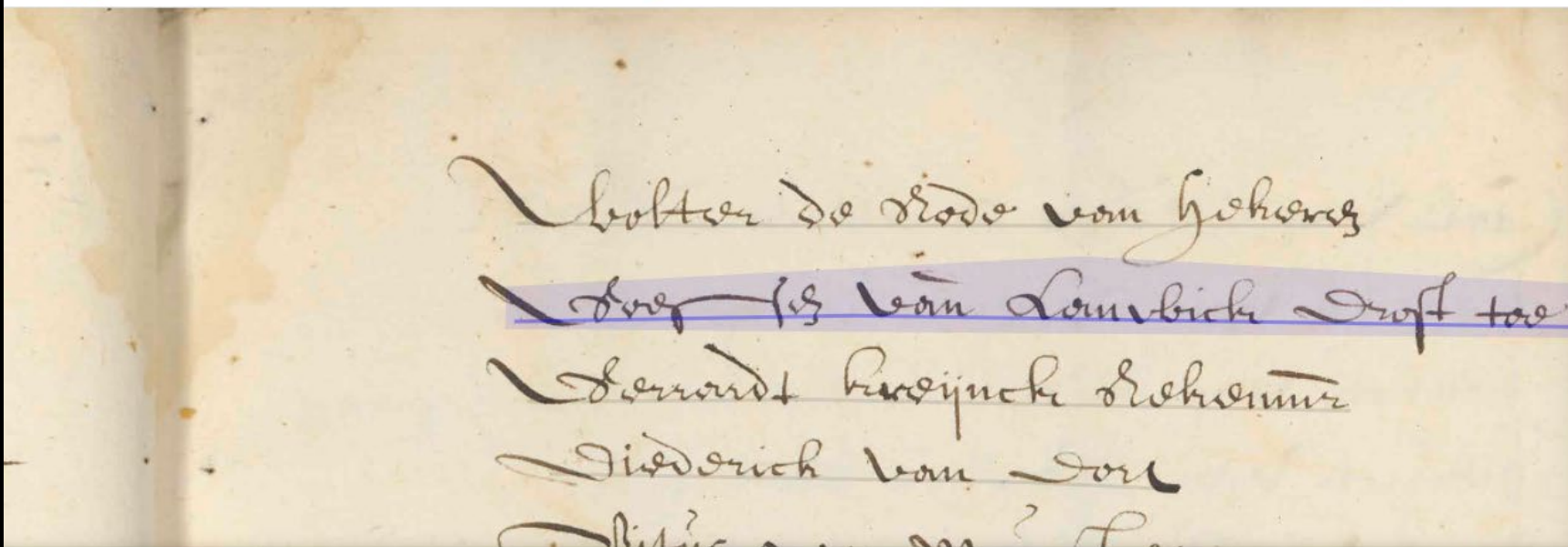


Read & Search service

- Keyword spotting and searching options are available through the Transkribus server (with log in through your own account).
 - See KWS in webinar 1 <https://youtu.be/5YCfaFNMol4?t=7266>
- If you have a (small) project and you want to provide the results to a wider audience but you do not want to have to figure out how to host/ create a website and such for all this searchable data...
Transkribus is going to offer this as a service. In other words: they can host your data and show it as a searchable website so others (without Transkribus accounts/ access to your collection) would be able to publicly view it.
- Works based on IIF.

Webversion

- The rights of someone you shared the folder with will be made the same within the webversion as in the desktop version (expert client). (So a co-owner or editor will be the same in both versions, meaning that they can sign a page off as GT.)
- If you need to use special signs: use Unicode. (e.g. Alt133 = é)
- Italics and bold are not (yet) possible in the web interface. (Mind you, these are not going to be integrated into a model anyway for the coming time; so ask yourself if you need these to be tagged/analysed).




- Persoonsnaam
- Plaatsnaam
- Gekopieerd
- Lijstjes en tabellen
- Paginanummer
- marginalia
- (Onder)titel
- Koptekst
- Voettekst
- Afbeelding
- Gedrukte Tekst

Navigation and editing icons: a plus sign in a circle, a minus sign in a circle, a house icon, and a pencil icon.

x² x₂ U ab ↩ ↪ ?! Unclear Annotation **NOTE:** right-click to add an

Text Region 3	
1	3
2	Woster de Node van hekere
3	Coessen van Lenwick Drost toe Bre
4	Gerrardt kreijnck Rekenmr
5	Diederick van Dort
6	Vitruvius Manutius

 Save Changes

Masking

- “blackening”
- You then draw a box over the text that you want to hide.
- N.B. it’s only a “layer”, not *in* the image.
- It will be in pdf but textual export contains the original text

The screenshot shows a document management interface with a sidebar on the left containing a document list and a main preview area on the right. The document list includes columns for ID, Title, Page number, Uploader, and Upload date. The document being previewed is a handwritten document with several lines of text. A red dashed box highlights a menu option 'Blackening' in the 'Tools' section. Below the preview, a list of document entries is shown, corresponding to the document's content.

ID	Title	Pa...	Uploader	Uploaded
42...	SALD_OAD_700c	198	info@car...	Thu Jun ...
42...	SALD_OAD_700b	212	info@car...	Thu Jun ...
41...	SALD_OAD_700e	167	info@car...	Thu Jun ...
41...	SALD_OAD_700f	155	info@car...	Thu Jun ...
41...	SALD_OAD_700g	230	info@car...	Thu Jun ...
41...	SALD_OAD_701	129	info@car...	Thu Jun ...
41...	SALD_OAD_702	181	info@car...	Thu Jun ...
41...	SALD_OAD_1405	201	info@car...	Thu Jun ...
41...	SALD_OAD_1406	52	info@car...	Thu Jun ...
41...	TRAINING_VALIDATION...	1	info@car...	Mon Jun ...
41...	NL-AhGIdA_2000_4720	10...	info@car...	Tue Jun 1...
41...	NL-AhGIdA_2000_4716	996	info@car...	Tue Jun 1...
41...	NL-AhGIdA_2000_4708	10...	info@car...	Tue Jun 1...
41...	NL-AhGIdA_2000_4717	956	info@car...	Tue Jun 1...
41...	NL-AhGIdA_2000_4714	686	info@car...	Tue Jun 1...
41...	NL-AhGIdA_2000_4710	618	info@car...	Tue Jun 1...
41...	NL-AhGIdA_2000_4706	10...	info@car...	Tue Jun 1...
41...	NL-AhGIdA_2000_4700	798	info@car...	Tue Jun 1...
41...	NL-AhGIdA_2000_4701	560	info@ca...	Tue Jun ...
41...	NL-AhGIdA_2000_4699	682	info@car...	Tue Jun 1...
41...	NL-AhGIdA_2000_456	308	info@car...	Tue Jun 1...
41...	NL-AhGIdA_0005_102	172	info@car...	Tue Jun 1...
41...	TRAINING_VALIDATION...	6	info@car...	Sun Jun ...
40...	SALD_OAD_17b	354	info@car...	Mon Jun ...
40...	SALD_OAD_700a	167	info@car...	Mon Jun ...
40...	NL-AhGIdA_2000_4692	738	info@car...	Sun Jun ...
40...	SALD_OAD_17a	403	info@car...	Mon Jun ...
40...	SALD_OAD_3	353	info@car...	Mon Jun ...
40...	SALD_OAD_2	347	info@car...	Mon Jun ...
40...	SALD_OAD_13	252	info@car...	Mon Jun ...
40...	SALD_OAD_16	223	info@car...	Mon Jun ...

100 Filter

5 / 560 In Progress

Server Overview Layout Metadata Tools

Logout info@caromein.nl

Document... Find

Document Manager User Manager

Versions Jobs

Recent Documents... User activity

Collections: Gelderland (62362, Owner) Col-ID

Documents HTR Model Data

1-101 / 204 1 3 Doc-ID

Table
Printspace
Advert
Chart
Chem
Graphic
Image
LineDrawing
Maths
Music
Noise
Separator
UnknownRegion
Blackening
Article (experimental)

Landt en Quartiers Recessen van Haren 1609
1610
1611 e
1612

herbael vant gebesoigneerde des Quartiersvan
Arnhem in AAugusto 1609 Folio-
2.

Lant dach in Aprili 1609. tot Zutphen
gespedijg .

1-1 Landt en Quartiers Recessen van
1-2 Haren
1-3 1609
1-4 1610
1-5 1611 e
1-6 1612
1-7 herbael vant gebesoigneerde des Quartiersvan
1-8 Arnhem in AAugusto 1609 Folio-
1-9 2.
1-10 Lant dach in Aprili 1609. tot Zutphen
1-11 gespedijg .

Server Overview Layout Metadata Tools

Logout info@caromein.nl

Document... Find

Document Manager User Manager

Versions Jobs

Recent Documents... User activity

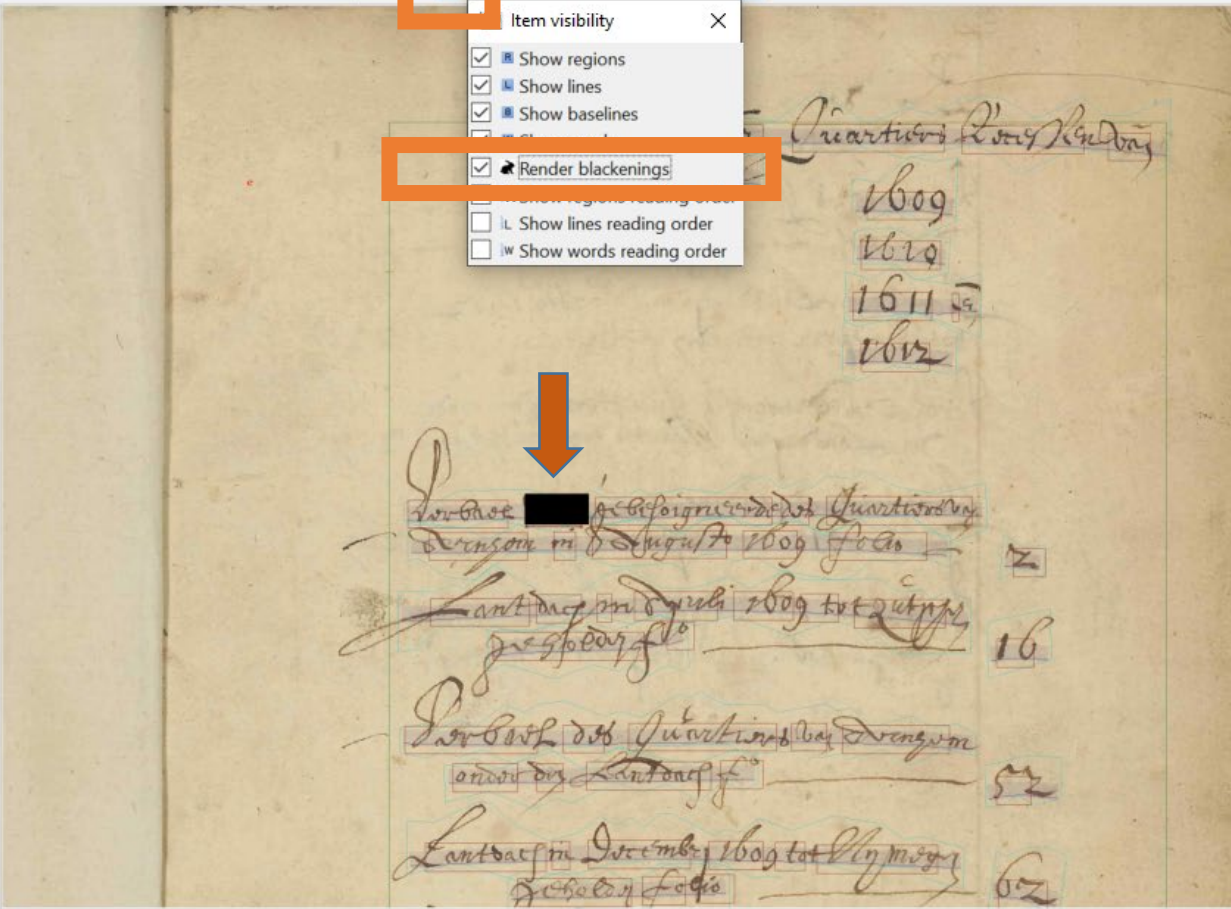
Collections: Gelderland (62362, Owner) Col-ID

Documents HTR Model Data

1-101 / 204 1 3 Doc-ID

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42...	SALD_OAD_700c	198	info@car...	Thu Jun ...
42...	SALD_OAD_700b	212	info@car...	Thu Jun ...
41...	SALD_OAD_700e	167	info@car...	Thu Jun ...
41...	SALD_OAD_700f	155	info@car...	Thu Jun ...
41...	SALD_OAD_700g	230	info@car...	Thu Jun ...
41...	SALD_OAD_701	129	info@car...	Thu Jun ...
41...	SALD_OAD_702	181	info@car...	Thu Jun ...
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41...	SALD_OAD_1406	52	info@car...	Thu Jun ...
41...	TRAINING_VALIDATION_...	1	info@car...	Mon Jun ...
41...	NL-AhGIdA_2000_4720	10...	info@car...	Tue Jun 1...
41...	NL-AhGIdA_2000_4716	996	info@car...	Tue Jun 1...
41...	NL-AhGIdA_2000_4708	10...	info@car...	Tue Jun 1...
41...	NL-AhGIdA_2000_4717	956	info@car...	Tue Jun 1...
41...	NL-AhGIdA_2000_4714	686	info@car...	Tue Jun 1...
41...	NL-AhGIdA_2000_4710	618	info@car...	Tue Jun 1...
41...	NL-AhGIdA_2000_4706	10...	info@car...	Tue Jun 1...
41...	NL-AhGIdA_2000_4700	798	info@car...	Tue Jun 1...
41...	NL-AhGIdA_2000_4701	560	info@ca...	Tue Jun ...
41...	NL-AhGIdA_2000_4699	682	info@car...	Tue Jun 1...
41...	NL-AhGIdA_2000_456	308	info@car...	Tue Jun 1...
41...	NL-AhGIdA_0005_102	172	info@car...	Tue Jun 1...
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40...	SALD_OAD_3	353	info@car...	Mon Jun ...
40...	SALD_OAD_2	347	info@car...	Mon Jun ...
40...	SALD_OAD_13	252	info@car...	Mon Jun ...
40...	SALD_OAD_16	223	info@car...	Mon Jun ...

100 Filter



- 1-1 Landt en Quartiers Recessen van
- 1-2 Haren
- 1-3 1609
- 1-4 1610
- 1-5 1611 e
- 1-6 1612
- 1-7 herbael vant gebesoigneerde des Quartiersvan
- 1-8 Arnhem in AAaugusto 1609 Folio-
- 1-9 2.
- 1-10 Lant dach in Aprilij 1609. tot Zutphen
- 1-11 gespedijg .

- Thank you for your attention!

