CLAAUDIA RESEARCH DATA SERVICES



Basic use guide for Transcriber 1.1

By CLAAUDIA

DeiC Interactive HPC UCloud Platform

1

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1 Introduction to UCloud

1.1 What is UCloud?

UCloud is what is called type 1 HPC – High performance Computing or DeiC Interactive HPC. It is a national service that all Danish universities have access to via DeiC. It is SDU who hosts it, but at AAU we are also responsible for some elements. We at CLAAUDIA are the front office and help the users of UCloud if they need help, and at the same time, we are the back office, where we help keep UCloud running.

1.2 Referencing and attribution of DeiC Interactive HPC resources in research

If you use Ucloud please remember to reference and attribute DeiC who makes the service available and free for you to use at all universities.

Read how to acknowledge the use of DeiC HPC resources on the DeiC information page on their website.

1.3 Log on to UCloud

UCloud is accessed via your browser using this link: https://cloud.sdu.dk/app/login

This will take you to the login page where you need to press the green button to login with WAYF.



It leads to the WAYF login page, where you must select Aalborg University (you can either search or scroll).

1.4 If this is your first time on UCloud

When you have clicked on Aalborg University, you will be asked to confirm that you want to use UCloud and that it is you, who is about to log in.



Here you need to press OK.

The Terms of Service will then appear. They must be accepted in order to use UCloud. The Accept button is at the bottom, which you must scroll down to and then a pop-up window will appear, where you must confirm that you accept the terms.

1.5 The landing page: You are now logged on to UCloud

You will then be taken directly to the front page of UCloud. It looks like this if you haven't used it before.

Provided by the AAU, AU, SDU consortium in collaboration with DeiC	

1.6 Basic information and documents

1.6.1 Username/ID

Your username, also called ID, is at the bottom of the screen on the left (see the red marking on the image above). It will most often be your name square/hashtag and a four-digit number in the form YourName#0000.

If you click on your ID name, you copy it and you can then send it to eventual collaborating partners you want to share files with or who wants to share files with you.

1.6.2 UCloud docs

This is a link to the UCloud documentation.

1.6.3 SDU Data protection

This is a link to the SDU data protection policy.

1.7 Menu Items

1.7.1 Files

To find files on UCloud, you must look at the menu on the left-hand side of the screen, where **Files** "Files" is at the top.



The first time you use UCloud, there is only the "Home" folder in here, but this is where you can find all your files in the future.

You have to upload all the files you need to use on UCloud yourself. This is therefore also where the files you create on UCloud must be located.

1.7.2 Shares

	Files
	Drives
*	🝝 Home
82	
٥	Shared files
-	E Shared with me
	🔁 Shared by me

Under "shares" In the menu at the left, it is possible to see if others have shared files or projects with you and you get an overview of what you have shared with others.

If you wish to share a file with someone, you must find the file in "files" press the three dots in the right and choose share, then write the user ID of the person(s) you want to share the file(s) with.

1.7.3 Resources



In "resources" you can search for public IPs, public links, Licenses or available SSH(Secure Shell) keys.

1.7.4 Apps

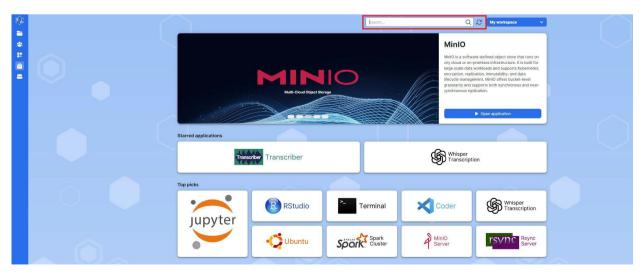


The UCloud platforms provides a large collection of ready to use applications that are hosted on the platform and presented to you via your web browser.

To find all applications you can either click on the "Apps" menu item in the left-hand navigation menu:

This will present a variety of summarized views of the applications that are available on the UCloud platform. You can select and run an application by clicking on the application box.

Or you can simply search for an application that you know in the search field at the top right of your browser window:



1.7.5 Runs



In the section "Runs" in the menu bar, you can see the jobs you have run in Ucloud and their status, if it was a success, expired or if it is running.

1.8 Upload your files

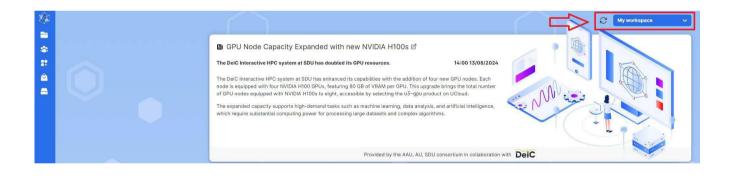
Before you can transcribe your files, you have to upload them to Ucloud.

1.8.1 Make sure you are working in the right "workspace"

When you start using projects or are invited to shared workspaces in UCloud it is important to check what workspace you are in. This can be checked at the top of the screen in the blue banner.

If you click the dropdown box, next to the UCloud logo, you will see a list of all "other" projects you are a part of, and the item in the blue header is the workspace you are currently in.

If this is your first time using UCloud, then you won't have any projects listed beneath "My Workspace".



1.8.2 Select the drive

Go into the drive where you wish to upload your files. For this example we will be using the "Home" drive.

	Files Orives	Drives		ର ଟ <mark>M</mark> y	workspace 🗸 🗸
** ** @	Shared files	Drive name	Provider	Created by	Created at
-	Shared with me Shared by me	✓ Home	SDU/K8 SDU/K8		

1.8.3 Create a folder for your files

Inside our selected drive, we now have a few options. We can upload our files directly to the drive or create a folder for the files. In this example we will first create a folder for our files, for easy navigation.

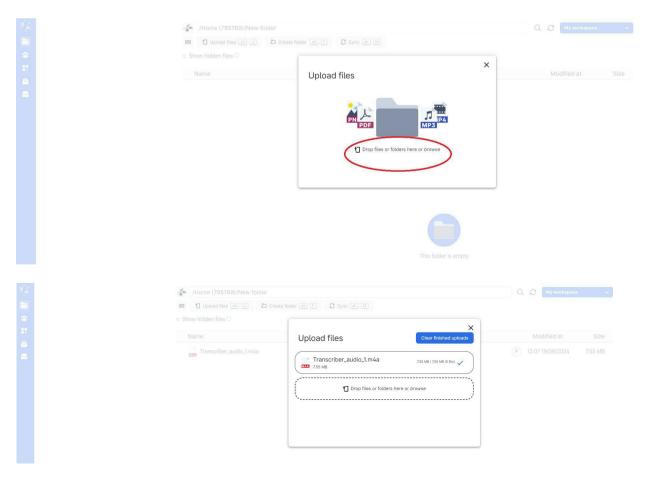
We begin by clicking on the "create folder" option:

	/Home (795769) Upload files attraction of the create folder att f Sync att M A Show hidden files	Q 📿 My workspace 🗸 🗸
₽ 0	Name	Modified at Size
	Trash	P 13:49 07/08/2024
	Syncthing	P 13:56 04/07/2023
	Jobs	P 08:43 01/07/2024

We then name the folder, click on it, and are now ready to upload our files.

 /Home (795769) 1 Upload files att U Create folder att F Sync att U Show hidden files 	Q 🕃 My workspace 🗸 🗸
Name New folder	Modified at Size P 11:19 19/08/2024 P 08:43 01/07/2024
Syncthing Trash	P 13:56 04/07/2023 P 13:49 07/08/2024

In our new new folder, we click on "upload files". We can now either "browse for file" or simply "Drop" the file over.



1.9 Create an output folder (optional)

Following the same procedure as for creating your files folder, you can create an output folder.

If you would rather just have the output in the standard location, you can ignore this step.

If you use an output directory (or folder) all files will be placed in that folder.

2 Using the Transcriber application:

2.1 Find the application

- 1. Go into application.
- 2. Use the search function to find Transcriber.



3. Click on Transcriber.

	Search results			Q 😂 My workspace	~
*	Transcriber	Transcriber Whisper is an Al transcription tool based on the language model Whisper from Open Al. It can transcribe from speech to text. This application uses Whisper to	\$	Whisper Transcription Whisper is an Al transcription tool based on the langue model Whisper from Open Al. It can transcribe from speech to text.	* age
-	STAR	STAR 🖈	Ś	Salmon: quant alignment Perform dual-phase, alignment-based estimation of transcript abundance from RNA-seq reads.	*

2.2 Using the application

You should now have the following screen:

\$\$ ■ ■ ■	Transcriber *	
	Whisper is an All transcription tool based on the language model Whisper from Open AI. It can transcribe from speech to text. This application uses Whisper to transcribe sound and video. On top this it utilizes WhisperX to add speaker diarization to the output. E-mail notification settings Do not notify me	f↓ Import parameters ► Submit Estimated cost - Current balance -
	Job name Example: Run with parameters XVZ Machine type * No machine type selected	Hours *
	Select folders to use If you need to use your files in this job then click "Add folder" to select the relevant files.	Add folder
	Optional Parameters Imput file Imput directory Option:output_dir Option:output_format	Search Use Use Use Use
*	Option:model Option:language Interactive mode Archive password	Une Une Une

There are several options here and it can seem a bit overwhelming. For this example, we will show the "quickest" way to start a transcription.

- 1. Choose a name for your job, pick something that will make it easy to find your data later on, and distinguish between different jobs: example: "Transcriber demo 1". Note: Job and file names cannot include any special characters such as "æøå".
- 2. Select the duration of your job in hours. Rule of thumb: The application can transcribe in 1:1 time, meaning that 1 hour audio file will take approximately 1 hour to transcribe. However, we recommend allocating double the length of the audio file, so 1 hour audio file= 2 hours in the application. This is just a safety precautions to ensure that the transcription will not stop during the process. This will not affect your amount of resources.

Note: If you run out of allocated time before your job is finished, the file that is being transcribed at that point will fail to be processed. You can allocate more time after starting the job if you suspect to run out of time.

3. Pick a machine to use.

We recommend the machine with called u3-gpu-1, as that option performed best in the tests we ran.(also, better than bigger machines)

Note: Feel free to play around and test this with a few sample files.

Ø			
	Transcriber \star 💈 🖓 Documentat	ion 🔛 🔂 🚺 Testi	ng project for CLA 🗸
*	Transfer 11 v		
**	Whisper is an Al transcription tool based on the language model Whisper from Open Al. It can transcribe from speech to text. This application uses Whisper to transcribe sound and video. On top this it utilizes WhisperX to add speaker	1↓ Import paran	neters Submit
	diarization to the output. E-mail notification settings Do not notify me	Estimated cost Current balance	2 GPU-hours 36,73 GPU-hours
	Job name	Pours *	
	Transcriber demo 1 Machine type *	2	+1 +8 +24
	3 ↔ ^{u3-gpu-1} vCPU Memory (GB) CPU	Price	*
	48 (AMD EPYC 9454) 192 1 (NVIDIA H100)	1 GPU-hours/hour	~

4. Select input file by clicking the "use" button.

Optional Parameters	Search
Initialization	Use
Input file	
Input directory	Use
Option:output_dir	Use
Option:output_format	Use
Option:model	Use
Option:language	Use
Interactive mode	Use
Archive password	Use

Click on the text box to select a file

Additional Parameters Input file No file selected Select file to transcribe.	Remove ×
Optional Parameters	Search
Input directory	Use
Option:output_dir	Use
Option:output_format	Use
Option:model	Use
Option:language	Use
Interactive mode	Use
Archive password	Use

You will be navigated to your "drives" Here you can click on the folder that have your file or if the fil is already here, simply click on "use" on the file you wish to use. In this example we have clicked on the folder "New folder" from previously and selected our audio file.

✓ ★ /Home (795769)/New folder	🔗 My workspace 🗸 🗸
Create folder ★ Favorites	
A Show hidden files □	
Name	Modified at
Transcriber_audio_1.m4a	P 19/08/2024 Use

5. We could begin our transcription now, but we recommend that you also selected where your output will end up. To do this click "use" on "option: --output_dir

Additional Parameters	Remove ×
/Home/New folder/Transcriber_audio_1.m4acli Select file to transcribe.	
Optional Parameters	Search
Input directory	Use
Option:output_dir	
Option:output_format	Use
Option:model	Use
Option:language	Use
Interactive mode Archive password	Use

Then click on the "text box" like before and select which folder you want your transcription to be. For this example, we want to output to be in our folder "New folder"

 /Home (795769) 	My workspace
✓ Use this folder 👌 Create folder 🔶 Favorites	
Show hidden files \Box	
Name	Modified at
Trash	P 08:49 Use
Syncthing	P 04/07/2023 Use
New folder	P 08:48 Use
Jobs	P 01/07/2024 Use

6. We are now ready to begin our transcription. Click on "submit" and your transcription will begin.

Note: There are other things you could do, but you can read more about these options in the "other options" section.

	■ T ★ sed on the language model Whisper from to transcribe sound and video. On top this if ▼	Open Al. It can transcribe from speech to	cumentation 🕑 📿 My	32 Core-hours
Job name Transcriber demo 1 Machine type * u1-standard-16 vCPU 16 (intel Xeon Gold 6130)	Memory (GB) 96	GPU Nons	Hours * 2 Price 16 Core-hours/hour	 (1) (8) (12) (*) (
Select folders to use If you need to use your files in this	s job then click "Acd folder" to select the re	ilevant files.		Add folder
Additional Parameters Input file /Home/New folder/Transcriber_J Select file to transcribe, Option:output_dir /Home/New folder Output directory for transcribed fi				Remove × Remove ×

7. At this step you are free to close your computer until transcriber is done. If you wish to make sure everything is running, then wait until a "node" has been assigned and your screen will look something like this:

	Transcriber demo 1 is now runn	ning (ID: 5074064) 2 Open terminal 2 Open terminal
۵	C Time allocation	Messages
	Job start: 11:02 21/08/2024 Job corp:r: 13:02 21/08/2024 Time remaining: 01:59:38 Extend allocation (hours): 1 08 224	[11:02] ThomasAndersen#4960 has requested 1x u1-standard-16 from DeiC Interactive HPC (SOU) [11:02] Assigned to nodeaa-11 [11:02] Job is starting soon [11:02] Job has started.
	Transcription is in progress	udio/core/io.py:43: UserWarning; torchaudiobackend.set_audio_backend has bee n is no-op. You can remove the function call.

8. Once the transcription is done, you will be met by something like this

Run application again			
Job info	Messages		
Name: Transcriber demo 1 ID: 5074064 Reservation: DeiC Interactive HPC (SDU) / u1-standard-16 (x1) Launched by: ThomasAndersen#4960 in My workspace	[11:02] ThomasAndersen#4960 has requested 1x (SDU) [11:02] Assigned to nodeaa-11 [11:02] Job is starting soon [11:02] Job has started [11:09] Job has terminated	u1-standard-16 from DeiC Interact	ive HPC
/Home (795769)/Jobs/Transcriber/Transcriber	r demo 1 (5074064)	Q & My workspace	
	r demo 1 (5074064)	Q C My workspace	
	r demo 1 (5074064)	Q & My workspace	Size
Upload files att U	r demo 1 (5074064)		Size 0 E
Upload files att U Create folder att F Name Transcriber audio 1 m4a	r demo 1 (5074064)	Modified at	

Note: This is not the actual output of your transcription. That can be found in the folder you selected for output. It may look something like this:

ŕ	/Home (795769)/New folder	Q	My workspace	
	1 Upload files att U Treate folder att F 3 Sync att M			
0.5	Show hidden files 🗆			
	Name		Modified at	Size
	Transcriber_audio_1_large-v3_en.vtt	P	11:08 21/08/2024	8.61 KB
	Transcriber_audio_1_large-v3_en.txt	P	11:08 21/08/2024	4.18 KB
	Transcriber_audio_1_large-v3_en.tsv	P	11:08 21/08/2024	5.99 KB
	Transcriber_audio_1_large-v3_en.srt	P	11:08 21/08/2024	9.77 KB
	() Transcriber_audio_1_large-v3_en.json	P	11:08 21/08/2024	151.35 KB
	() Transcriber_audio_1_large-v3_en.dote.json	P	11:08 21/08/2024	18.27 KB
\$	but Transcriber_audio_1_large-v3_en.docx	P	11:08 21/08/2024	110.19 KB
	Transcriber_audio_1_large-v3_en.csv	P	11:08 21/08/2024	75.96 KB
	Transcriber_audio_1_large-v3_en.aud	P	11:08 21/08/2024	7.95 KB
	Transcriber_audio_1.m4a	P	12:07 19/08/2024	7.55 MB
	↓ Transcriber demo 1.zip	P	11:08 21/08/2024	7.58 MB
	transcribe.log	P	11:08 21/08/2024	334 B

There are several different files with your transcription. The most commonly used formats are the ".txt" file and the ".docx" file. You are welcome to look at the different formats and use the one that best suits your needs. If you would prefer

to only have your preferred format as an output, then please look at "output_format" under "other options" in this guide.

Remember that you can always contact CLAAUDIA at https://serviceportal.aau.dk/ if you need any assistance.

3. Other options

3.1 **Option: --output_ format**

The default option is for all 8 formats to be produced automatically.

Selecting one of the following formats will limit the output to only that format.

The optional output formats include .csv, .srt, .txt, .vtt, .json, .tsv, .docx and DOTE.

- 1. CSV:
 - a. Contains every parameter outputted from the whisper model.
- 2. SRT:
 - a. SubRip file format, widely adopted subtitle format.
- 3. TXT:
 - a. Pure text file with the transcription.
- 4. VTT:
 - a. Web Video Text Tracks format. Contains timestamps.
- 5. JSON:
 - a. JavaScript Object Notation.
- 6. TSV:
 - a. Tab-separated value file contain start, end and text.
- 7. DOTE:
 - a. DOTE Transcription software developed by the BigSoftVideo team at AAU.
- 8. DOCX:
 - a. Text file with the transcription and speaker recognition.

Optional Parameters	Search
Input file	Use
Input directory	Use
Option:output_dir	Use
Option:output_format	
Option:model	Use
Option:language	Use
Interactive mode	Use
Archive password	Use

3.2 Optional: --output model

This allows you to choose the model size. The options are small, medium or large. The smaller model runs faster but is less accurate. The medium model a little slower and significantly more accurate. The large model is the most accurate and runs the slowest.

The default is to use the large model, and with a machine with 16 vCPUs and 96GB memory, the speed of transcription is roughly the same as the audio recorded. i.e. 1 minute of audio takes roughly 1 minute to transcribe.

Optional Parameters	Search
Input file	Use
Input directory	Use
Option:output_dir	Use
Option:output_format	Use
Option:model	
Option:language	Use
Interactive mode	Use
Archive password	Use

3.3 Optional: --output language

This allows you to specify the language that the model will use to evaluate the audio for text. The officially supported languages are included in a dropdown list, from which you can choose one language.

The default is for the Whisper model to automatically detect the language of the audio that is processed.

Note: This selection also determines the output language of the text that is produced by the model.

The whisper model also automatically translates audio from multiple languages into the language that is chosen/detected language of the audio file. I.e. if there are multiple languages spoken in the audio, it will only produce text output in one language.

For example, if the chosen / detected language is English and the audio file includes English, Danish, Spanish and Greek. All the text in the output files will be in English.

Optional Parameters	Search
Input file	Use
Input directory	Use
Option:output_dir	Use
Option:output_format	Üse
Option:model	Use
Option:language	
Interactive mode	Use
Archive password	Use