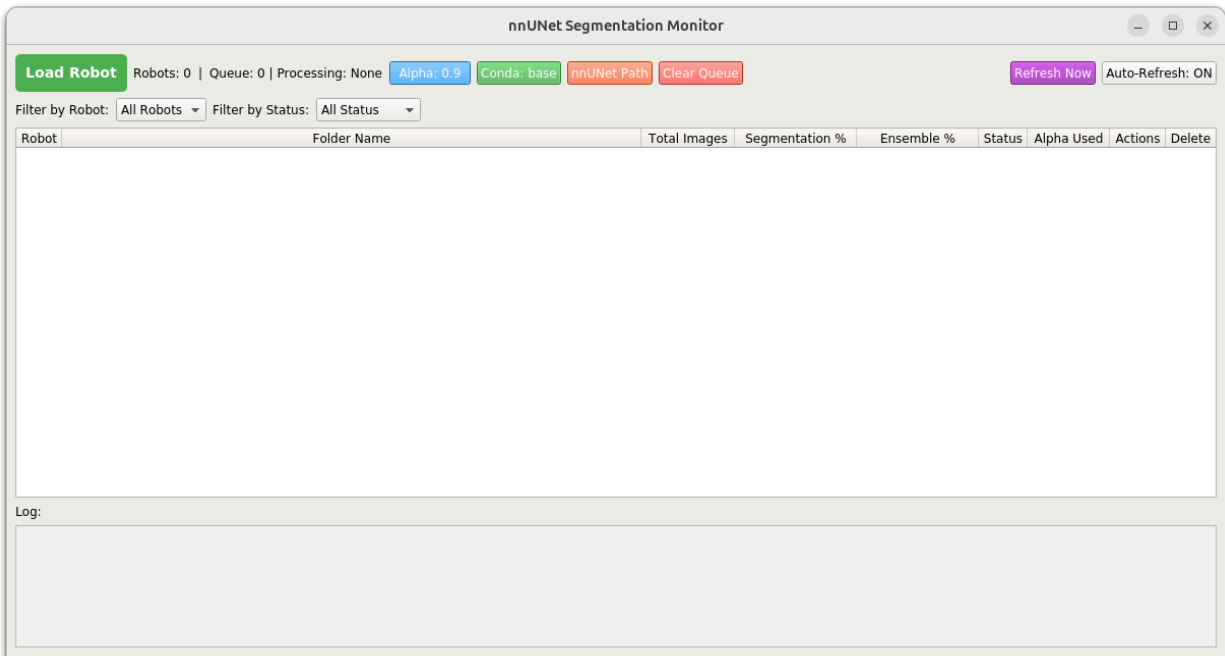


## Segmentation Pipeline.

To begin the segmentation process, launch the segmentation interface by entering "segmentation" in the command line. This will open the main segmentation window.



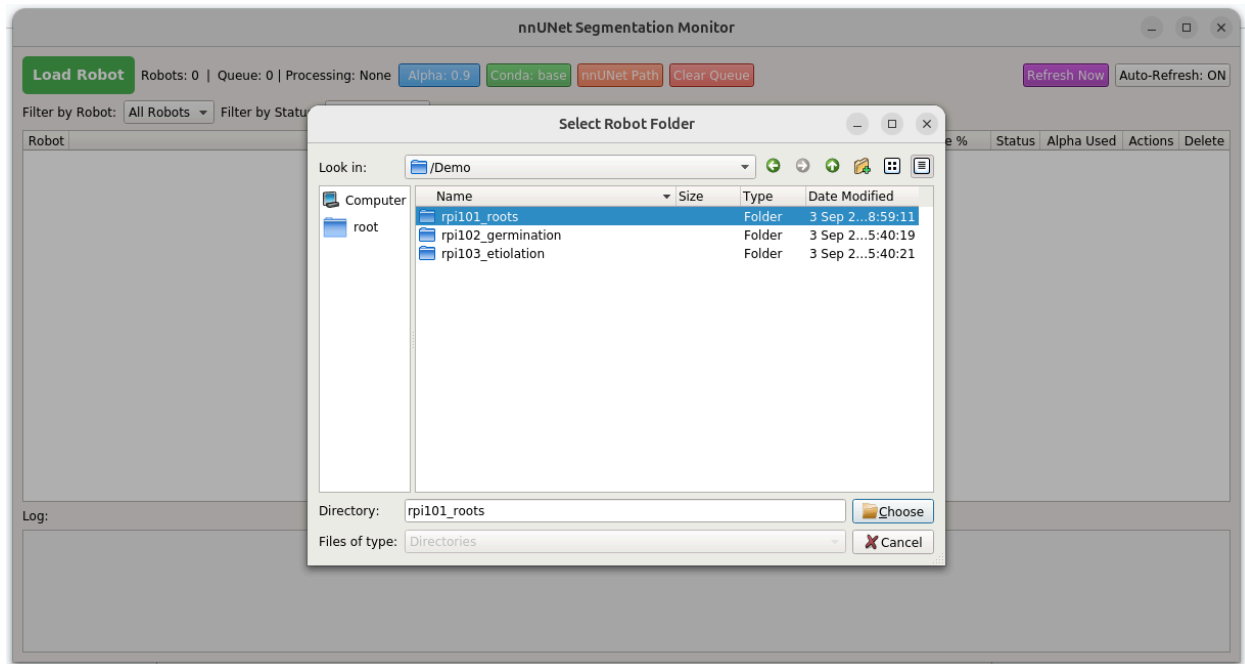
The interface contains only a few buttons:

- **Load Robot:** Imports data from a Raspberry Pi module, including time series data from all four hardware module cameras
- **Conda:** Specifies the Anaconda environment name (leave unchanged if using Docker)
- **nnUNet Path:** Defines the directory containing nnUNet\_raw, nnUNet\_preprocessed, and nnUNet\_results folders (leave unchanged if using Docker)

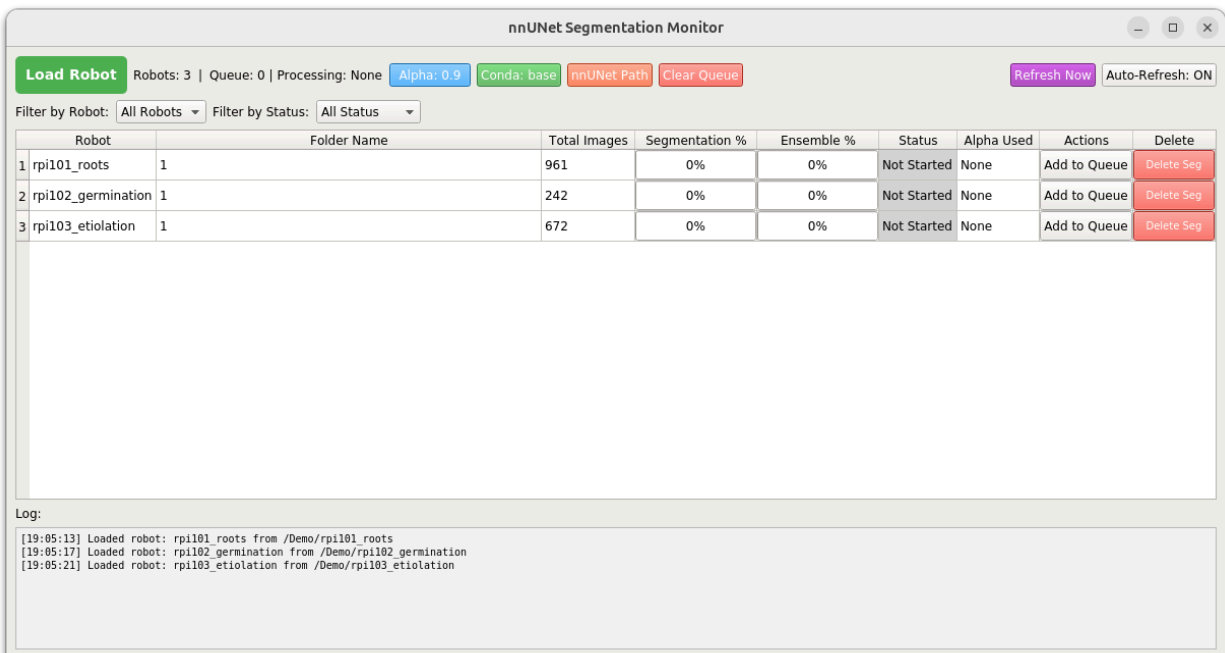
## Getting Started:

### Load Your Data:

Begin by loading all robot datasets individually from the demo folder. In this demonstration, each robot contains data from one camera, with three robots total corresponding to each experiment.



**Queue Your Jobs:** Add all robot folders to the processing queue. You'll notice the status indicator will update to either "Processing" or "Queued" depending on the current workload.



## Monitor Progress:

The log panel at the bottom displays important process information and updates. Allow the complete segmentation process to finish before proceeding to the next step.

nnUNet Segmentation Monitor

Load Robot

Robots: 3 | Queue: 2 | Processing: Segmenting: 1

Alpha: 0.9

Conda: base

nnUNet Path

Clear Queue

Refresh Now

Auto-Refresh: ON

Filter by Robot: All Robots

Filter by Status: All Status

	Robot	Folder Name	Total Images	Segmentation %	Ensemble %	Status	Alpha Used	Actions	Delete
1	rpi101_roots	1	961	0%	0%	Segmenting	Unknown	Running...	Delete Seg
2	rpi102_germination	1	242	0%	0%	Queued	None	Remove	Delete Seg
3	rpi103_etiolation	1	672	0%	0%	Queued	None	Remove	Delete Seg

Log:  
[19:05:13] Loaded robot: rpi101\_roots from /Demo/rpi101\_roots  
[19:05:17] Loaded robot: rpi102\_germination from /Demo/rpi102\_germination  
[19:05:21] Loaded robot: rpi103\_etiolation from /Demo/rpi103\_etiolation  
[19:06:00] Added 1 (rpi101\_roots) to queue for segmentation + ensemble  
[19:06:01] Started segmentation for 1 (rpi101\_roots) using conda env 'base' and nnUNet path '/app/Segmentation/ChronoRoot\_nnUNet'  
[19:06:01] 1: Starting segmentation...  
[19:06:01] 1: Running nnUNet...  
[19:06:02] Added 1 (rpi102\_germination) to queue for segmentation + ensemble  
[19:06:03] Added 1 (rpi103\_etiolation) to queue for segmentation + ensemble

nnUNet Segmentation Monitor

Load Robot

Robots: 3 | Queue: 1 | Processing: Segmenting: 1

Alpha: 0.9

Conda: base

nnUNet Path

Clear Queue

Refresh Now

Auto-Refresh: ON

Filter by Robot: All Robots

Filter by Status: All Status

	Robot	Folder Name	Total Images	Segmentation %	Ensemble %	Status	Alpha Used	Actions	Delete
1	rpi101_roots	1	961	100%	100%	Complete	0.9	—	Delete Seg
2	rpi102_germination	1	242	28%	0%	Segmenting	Unknown	Running...	Delete Seg
3	rpi103_etiolation	1	672	0%	0%	Queued	None	Remove	Delete Seg

Log:  
[19:50:42] 1: Starting ensembling...  
[19:50:42] 1: Running ensemble...  
[19:50:13] 1: Ensemble output: Ensembling 1 folds.  
Postprocessing with alpha = 0.9.  
...  
[19:58:13] Ensembling completed for 1 (961 files)  
[19:58:13] Started segmentation for 1 (rpi102\_germination) using conda env 'base' and nnUNet path '/app/Segmentation/ChronoRoot\_nnUNet'  
[19:58:13] 1: Starting segmentation...  
[19:58:13] 1: Running nnUNet...