MIC Lab GPU Server Setup Setup Guidance

1. Permission

- a. Email your GitHub account name to Dr. Qin
- b. You will receive a GitHub organizations invitation from MIC-Lab GitHub and accept the invitation



2. Server Login and Workspace Creation

a. Sever sign-in portal with your GitHub account:

Server 1: http://server1.sfsu-miclab.org

Server 2: http://server2.sfsu-miclab.org



b. Create a workspace by clicking the deep-learning-docker:

Workspa	ces ®				+ Create Worksp	bace	
Filters ~	۹ owner:me		😂 miclab		All templates ~	All statuses	
No records avail	able						
Name	Template		L	atus			
	Croc	ata a warke	2222				
		r personal, custo	omizable developn	nent			
	environment. Se	elect one templa	ate below to start.				
	deep Docke	-learning-docker er containers for de	ep-learning				
	frame	work					

c. Name the Workspace with your LastName and Project Name (e,g, *Qin-ENGR413*):

New workspace	Cancel
General The template and name of your new workspace.	deep-learning-docker Docker containers for deep-learning framework
	Workspace Name Qin-ENGR413
Workspace Owner	Owner mic.lab.edu@gmail.com
users.	
Parameters	🔰 JetBrains IDE
Settings used by your template	💿 🛍 PyCharm Professional
	RAM (GB) Choose amount of RAM (min: 16 GB, max: 64 GB)
	32

d. Select Deep Learning Framework based on your need and click Create Workspace:

Immutable parameters These settings cannot be changed after	⊕ C	Deep Learning Framework Choose your preffered framework
creating the workspace.	0 ()	PyTorch PyTorch
	0 🏫	Tensorflow Tensorflow
	0 🗞	Tensorflow + PyTorch Tensorflow + PyTorch
	۵ 🕲	Tensorflow + PyTorch + conda Tensorflow + PyTorch + conda
	0 0	Only conda (install whatever you need)
		Cancel Create Morksmann

e. It will take a few minutes to set up.

tatus: tarting	Template: deep-learnii	ng-docker	Version: 2.8	
Sta	rting workspace			Up to 95 seconds remaining
	Build logs			
	Starting workspace			10 seconds
	10:23:36.894	docker_volu	ne.usr_volume: Creation complete after 0s [id=coder-miclab-qin-engr413-usr]	
	10:23:36.894	docker_volu	ne.opt_volume: Creation complete after 0s [id=coder-miclab-qin-engr413-opt]	
	10:23:36.901	docker_volu	ne.etc_volume: Creation complete after 0s [id=coder-miclab-qin-engr413-etc]	
	10:23:36.905	coder_agent	main: Creation complete after 0s [id=e6523616-3fce-4d0b-8499-da0e3c708cce]	
	10:23:36.911	module.jetk	ains_gateway.coder_app.gateway: Creating	
	10:23:36.912	coder_app.c	ode-server: Creating	
	10:23:36.915	coder_app.c	de-server: Creation complete after 0s [id=6418fc2d-4070-464b-93af-ac4912b9d	220]
	10:23:36.917	module.jetk	ains_gateway.coder_app.gateway: Creation complete after 0s [id=48f3f08f-152	c-4bd4-b38d-a64676d63d06]
	10:23:36.952	docker_imag	deeplearning: Creation complete after 0s [id=sha256:d47f3811f1937d2235725ed	03420111ea683ed1bdc4508063df456cd7b0c1d08dmatifali/
	10:23:36.967	coder_metac	ta.workspace_info[0]: Creating	
	10:23:36.972	coder_metad	ta.workspace_info[0]: Creation complete after 0s [id=e61d1a55-5312-470f-88de	e-9c21afaa7c89]
	10:23:36.993	docker_cont	iner.workspace[0]: Creating	1
	10:23:46.994	docker_cont	<pre>iner.workspace[0]: Still creating [10s elapsed]</pre>	

- 3. Start Workspace:
 - a. After creating the Workspace, you can start using it by clicking on VS Code Desktop (**recommended if you have it installed on your laptop**) or VS Code Server.

•	Qin-ENGR413 miclab	Status: Running	Template: deep-learning-docke	Version: r 2.8								Stop	5 Restart	
			docker_container workspace											
			• main Linux Upd			VS Code De	sktop 対 c	ode-server & Pyt	Charm Professional	Terminal	SSH			
			CPU Usage Workspace 0.575 cores	RAM Usage Workspace 0.194/32 GiB (1%)	CPU Usage Host 0.402/24 cores (2%)	RAM Usage Host 2.66/62.6 GiB (4%)	GPU Usage 0%	GPU Memory Usage 0%	Word of the Day Harry	Disk Usage 727/937 GiB				
			 Show logs 											
			docker_image deeplearning	Framework Tensorflow + P	RA yTorch + con 32	M (GB) 2								

b. Click Open



c. Click Open Folder -> OK.





d. Create a New Terminal:



PROBLEMS OUTPUT DEBUG CONSOLE	PORTS	() bash + \sim (1) (1) \sim \sim \times
○ (DL) coder@qin-engr413:~\$ 📕		
¥ 0		

e. Check the GPU status:

ſ	PROBLE	MS C	OUTPUT	DEBUG C	ONSOLE	TERM	MINAL	PORTS						
•	(DL) <mark>c</mark> Tue Ju	oder@qi l 16 17	. n-engr 4 :32:11	13:~ \$ nvi 2024	dia-smi.									
-	NVIDIA-SMI 555.42.02 Driver Version: 555.42.02 CUDA Version: 12.5													
	GPU Fan	Name Temp	Perf	P P	ersiste wr:Usag	nce-M e/Cap	Bus-I	d Merr	Disp.A ory-Usage	Volatile GPU-Util 	Uncorr. ECC Compute M. MIG M.			
_	====== 0 0%	NVIDIA 40C	GeFord P8	ce RTX 308	0 22W /	0ff 320W	000	00000:01 25MiB /	:00.0 Off 10240MiB	+========= 	N/A Default N/A			
	Proco GPU	esses: GI ID	CI ID	PID	Туре	Proces	ss name				GPU Memory Usage			
	 +													

f. Stop after using it or Restart the server.

合}	Workspaces	Template	s Users	Deploymen												🏠 32ms	-) (*
	Qin-ENGR413 miclab	Status: Runnii	Template: Ig deep-lea	rning-docker	Version: 2.8										Stop	3 Restart		
			 docker_ works main 	container pace Linux Updated				VS Code Desk	top	×1 code-server	😫 PyChar	m Professional	Terminal	SSH				
			CPU Usage Worl 0.011 cores	(space RAM 0.41	Usage Workspace 7/32 GiB (1%)	CPU Usage Host 0.397/24 cores (2%)	RAM 2.72	Usage Host /62.6 GiB (4%)	GPU Us 0%	age GPU Mem 0%	ory Usage	Word of the Day Harry	Disk Usage 728/937 (
		I	docker_ deepl	^{image} earning	Framework Tensorflow +	R/ PyTorch + con 3:	AM (GB) 2											