Cybershuttle Local Agent
Tutorial Instructions

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V1.0
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Content

Cybershuttle (CS) Local Agent

Cybershuttle (CS) Local Agent is a desktop client powered by Apache Airavata middleware. It enables domain scientists, researchers, and students to seamlessly execute their research workflows across a variety of resources, including local laptops, remote computing resources, and cloud environments. Additionally, it facilitates connections with multiple data locations of their choice, ensuring a smooth and efficient research experience.

In this documentation, we provide detailed instructions for using the CS Local Agent, specifically focusing on running Neuroscience Sleep Stage Transition simulations and performing post-analysis tasks.

Download CS Local Agent

1. Visit https://testdrive.cybershuttle.org/
2. Create Cybershuttle testdrive account using your existing institutional credentials.
3. You will be given access to run remote computations on ACCESS resource, Expanse.

Balance Local and Remote for Streamlined Research with Cybershuttle

Cybershuttle expertly balances local and remote computing, seamlessly orchestrating tasks and data between machines. Schedule time-sensitive, small tasks locally, and reserve compute-intensive tasks for powerful remote HPC resources, with data transparently accessible everywhere. This approach significantly enhances the efficiency of scientific workflows compared to fully remote or fully local operations.

Local   Remote

| Main Features

User Productivity

Enable individual researchers to provide an individual view into research computing

Extensibility & Collaborations

Instead of learning from scratch, modify an existing experiment and

Third-Party App Integrations

Access to synchronized cloud tools to gain deeper insights from the

Reproducible Computations

Shared associated data and experiments captured in the system generating quick results
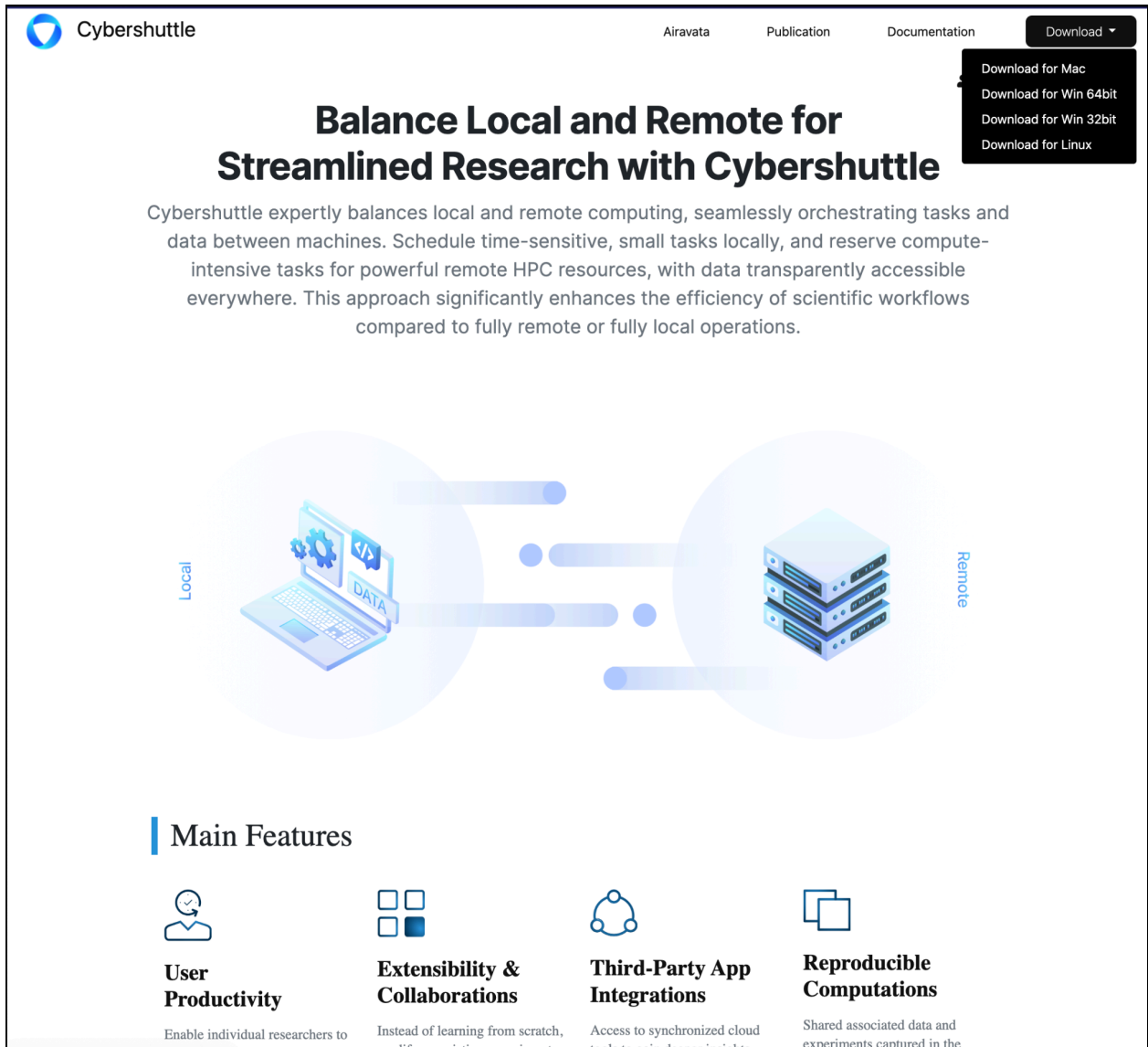
4. Download Local Agent for you

Image - Cybershuttle Testdrive Web Portal

5. Install the Local Agent.
6. NOTE: When installing or Linux, Unzip the downloaded file install the 'cybershuttle-local-agent' from command line and adjust the permission with *chmod +x*

Local Agent Login
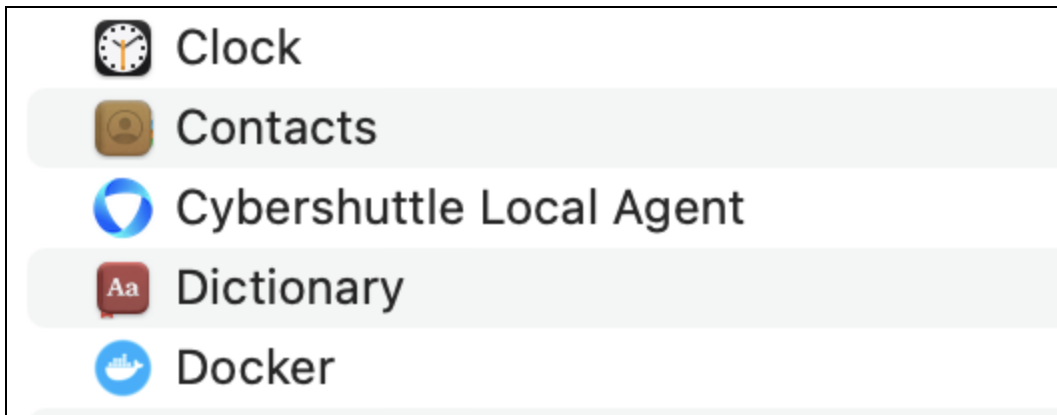
1. After the installation open the Local Agent.
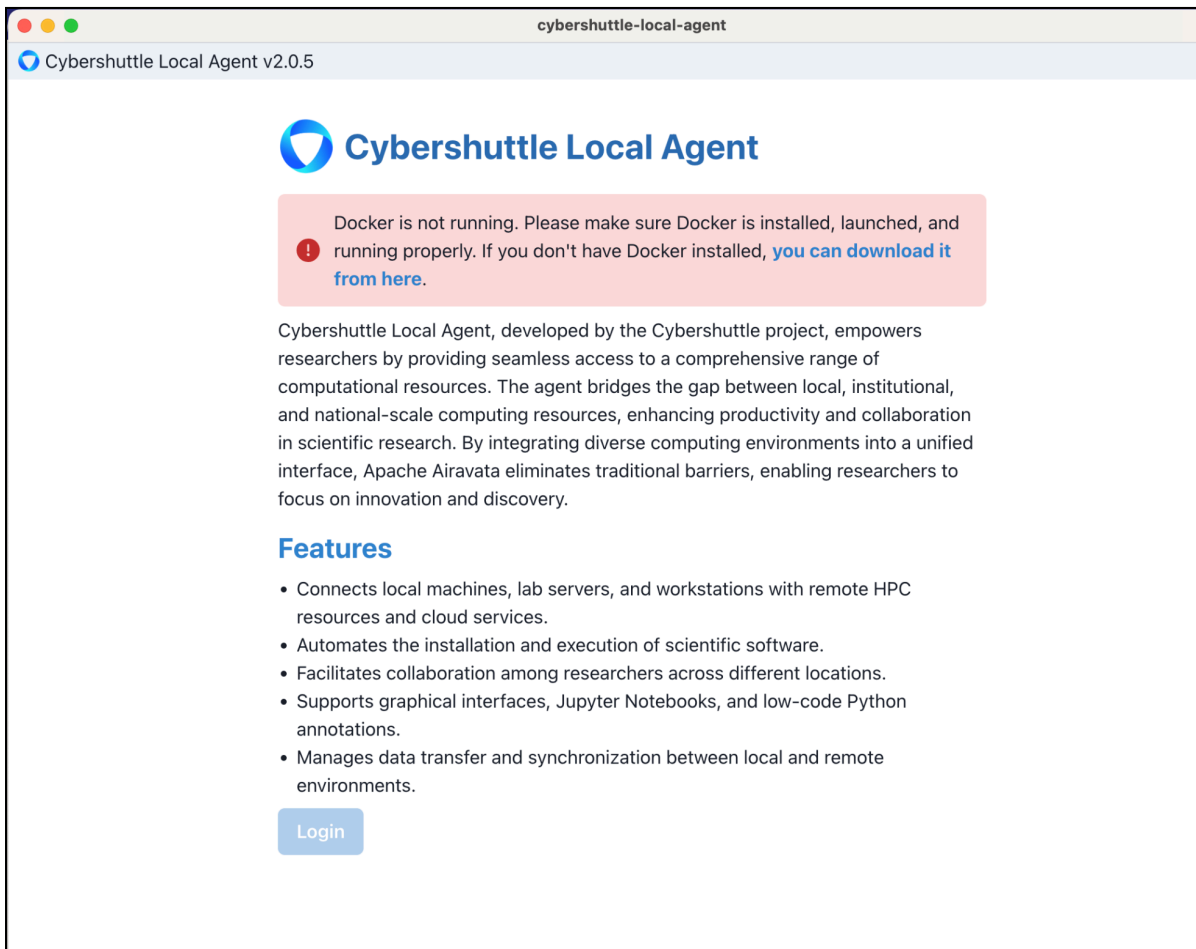
Image - Open the Local Agent

Image - Local Agent without Docker

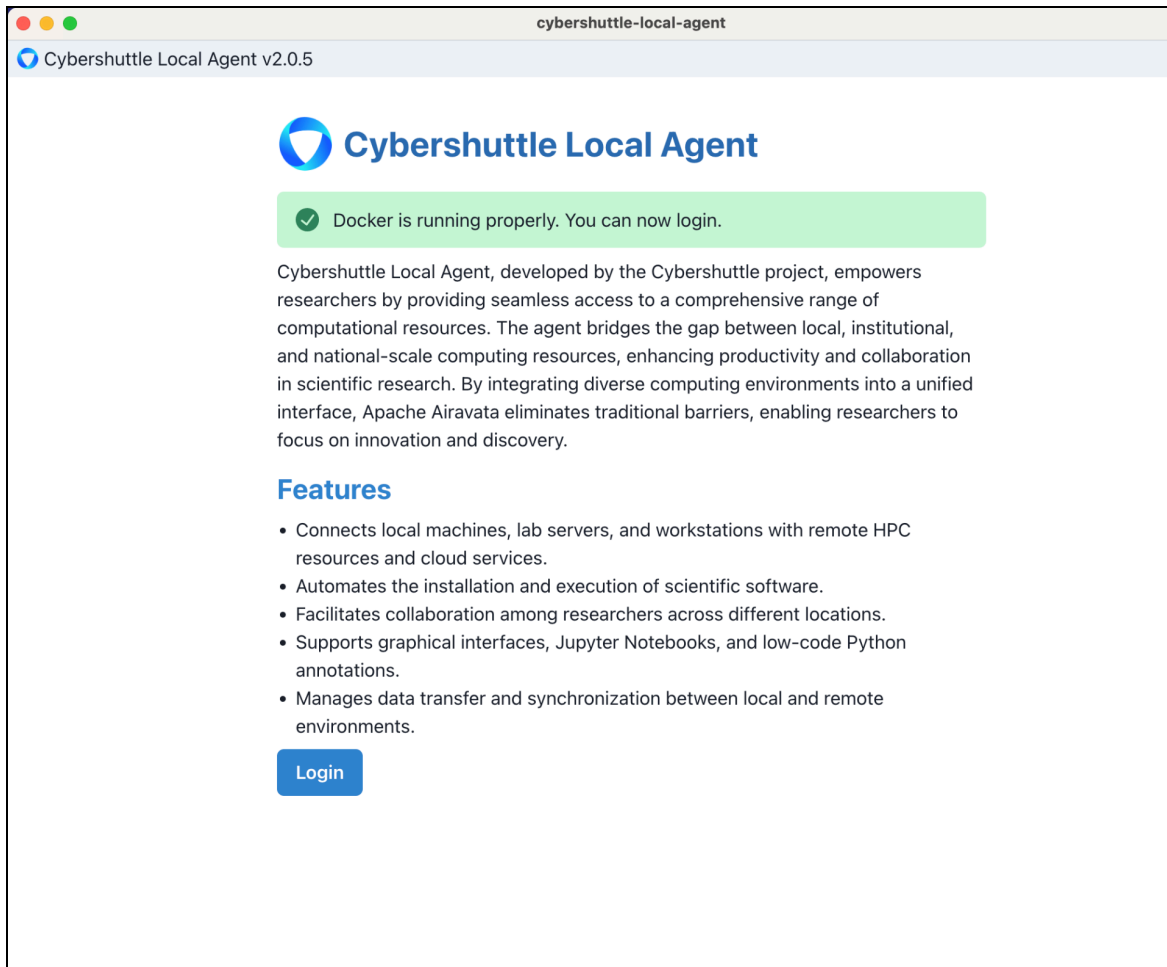2. NOTE: Docker installation links are provided. The Login is disabled, if docker is not running.

Image - Local Agent Home Page

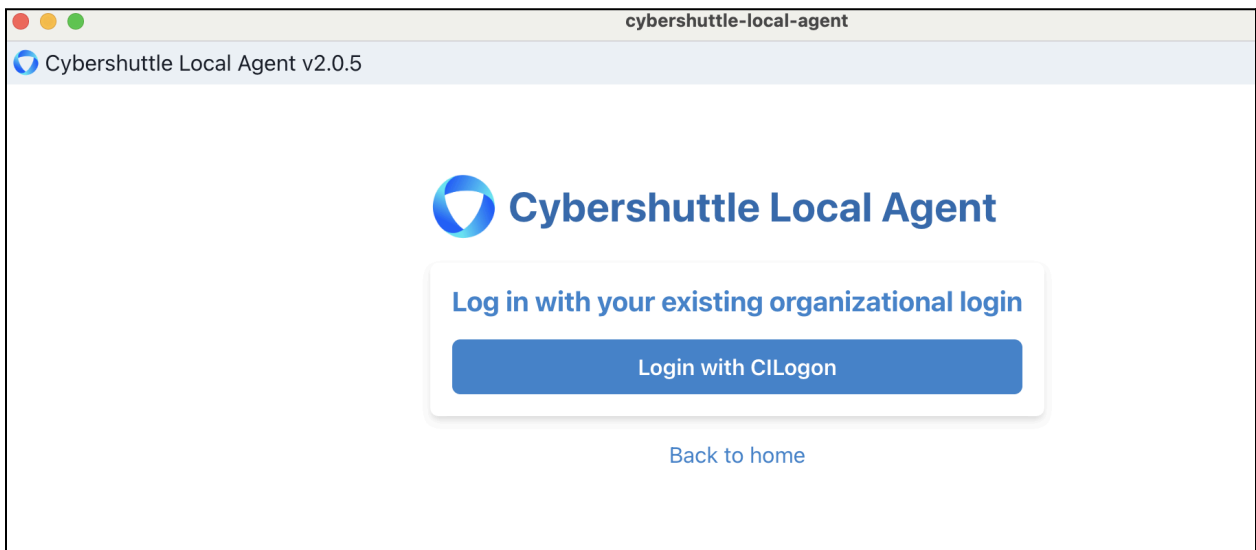3. Login with your institutional login through CILogon
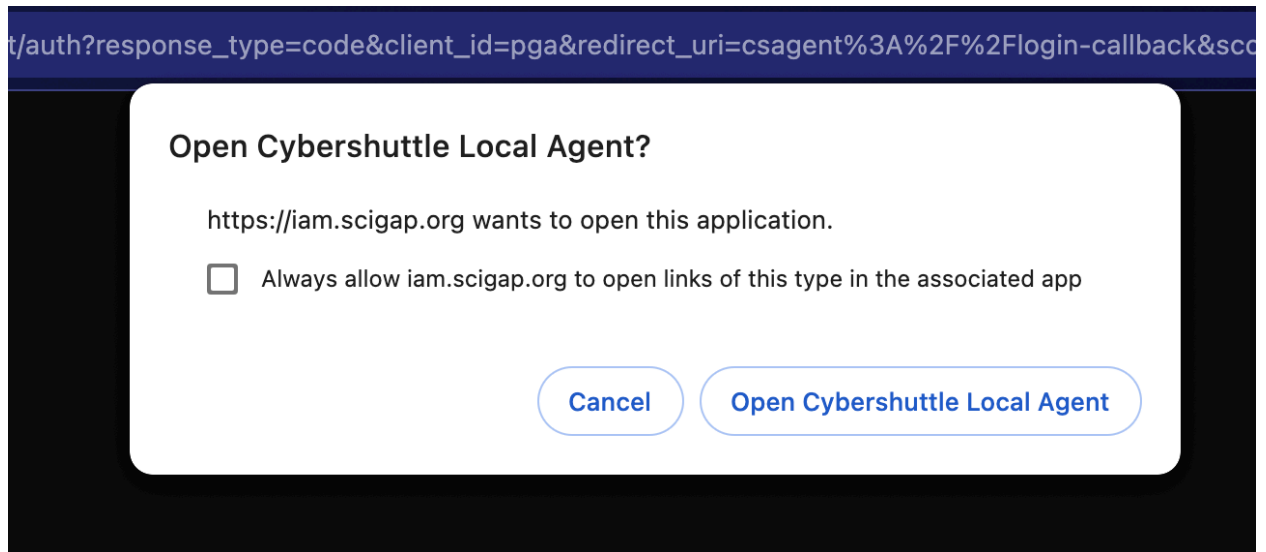

Image - Login Page

Image - Login Confirmation

4. Click "Open Cybershuttle Local Agent"
5. You will be prompted the CILogon page for institutional login.
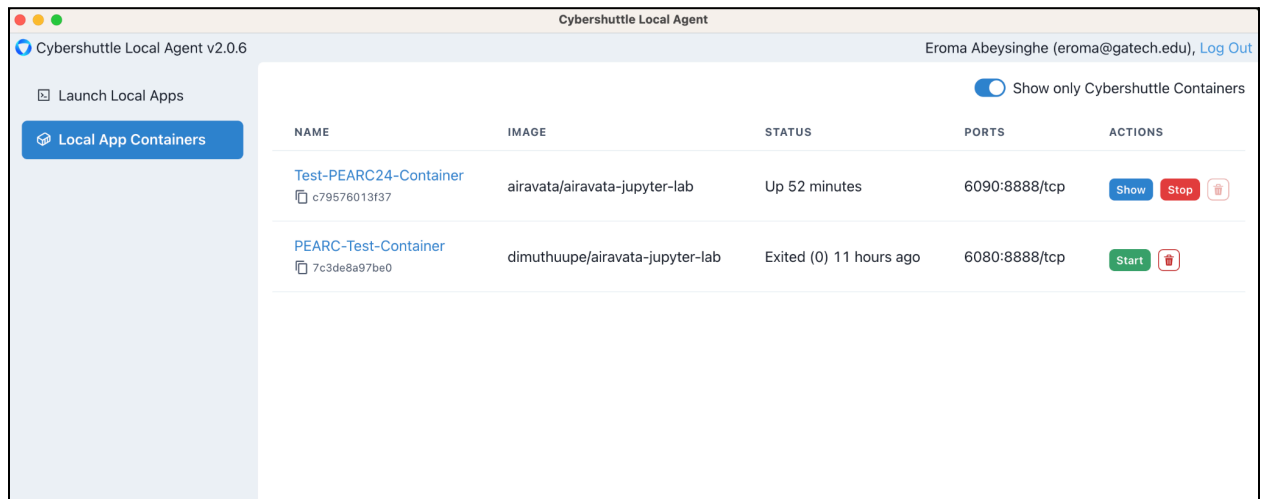6. You are in the main workspace. For new users this space would be empty.

Image - Local Agent View

Create a Container

1. From 'Launch Local Apps' select 'Airavata Jupyter Lab' to create a container for local and remote executions.
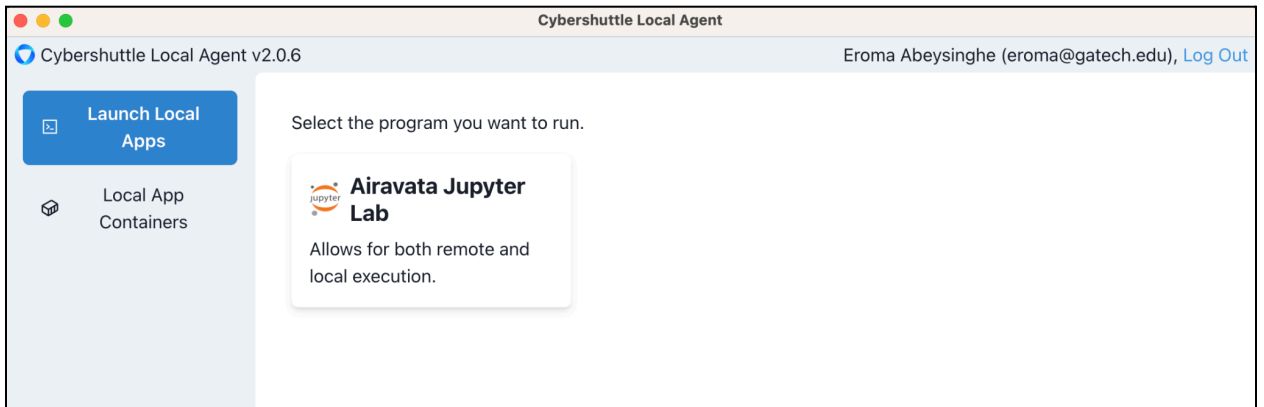

 Image - Select to Create a Container

2. Provide the details; Name, Port.
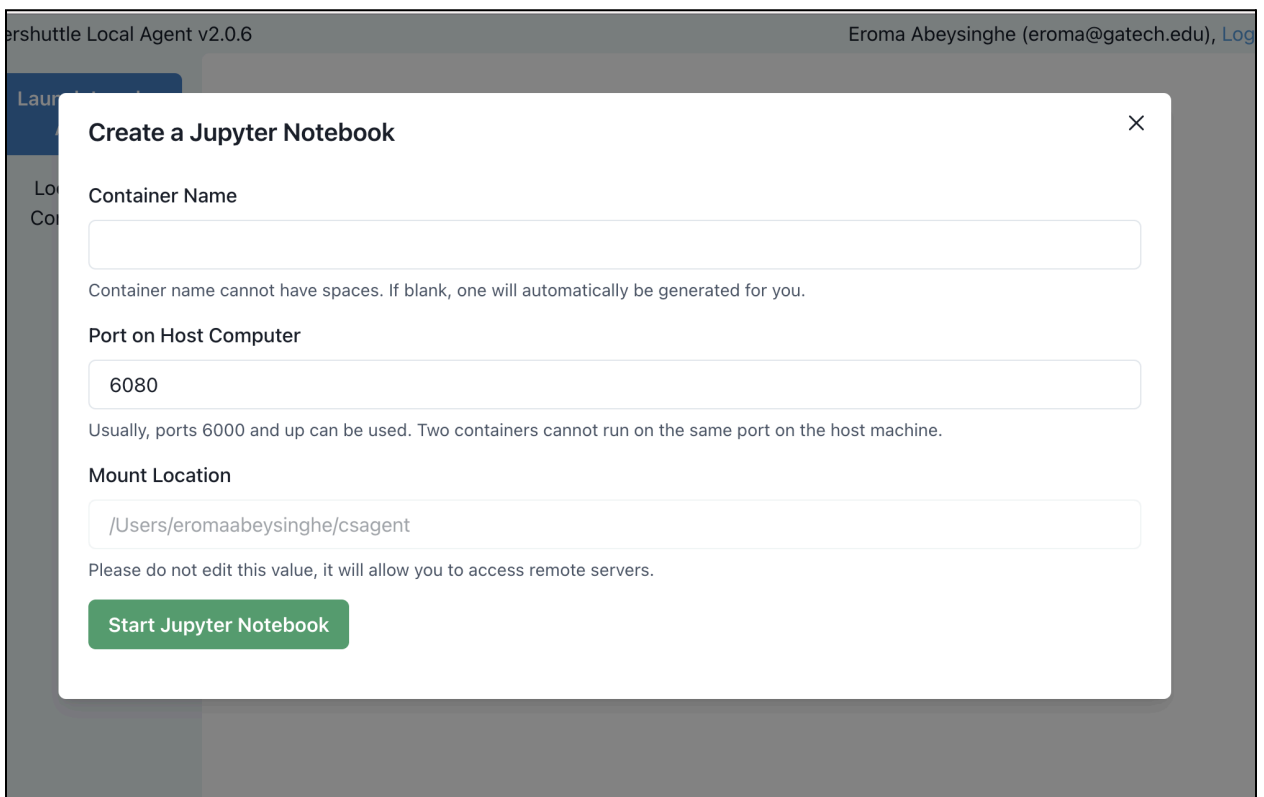3. Click 'Start Jupyter Notebook'

 Image - Creating the Container to Run a Notebook

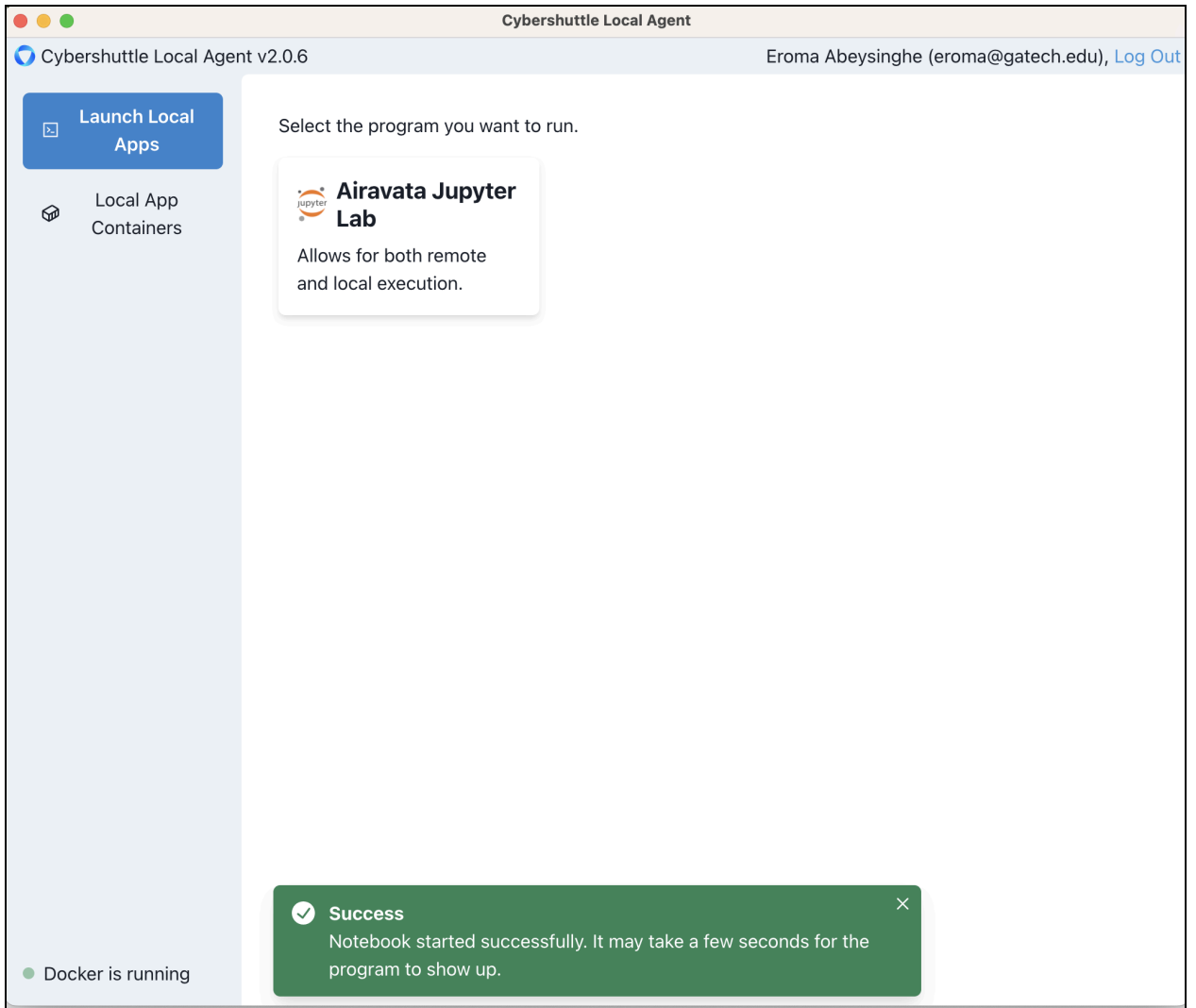4. When the Notebook is ready, you would be prompted with a notification.

Image - Notebook Notification

5. A separate window will open, you can select the already given notebook to run.
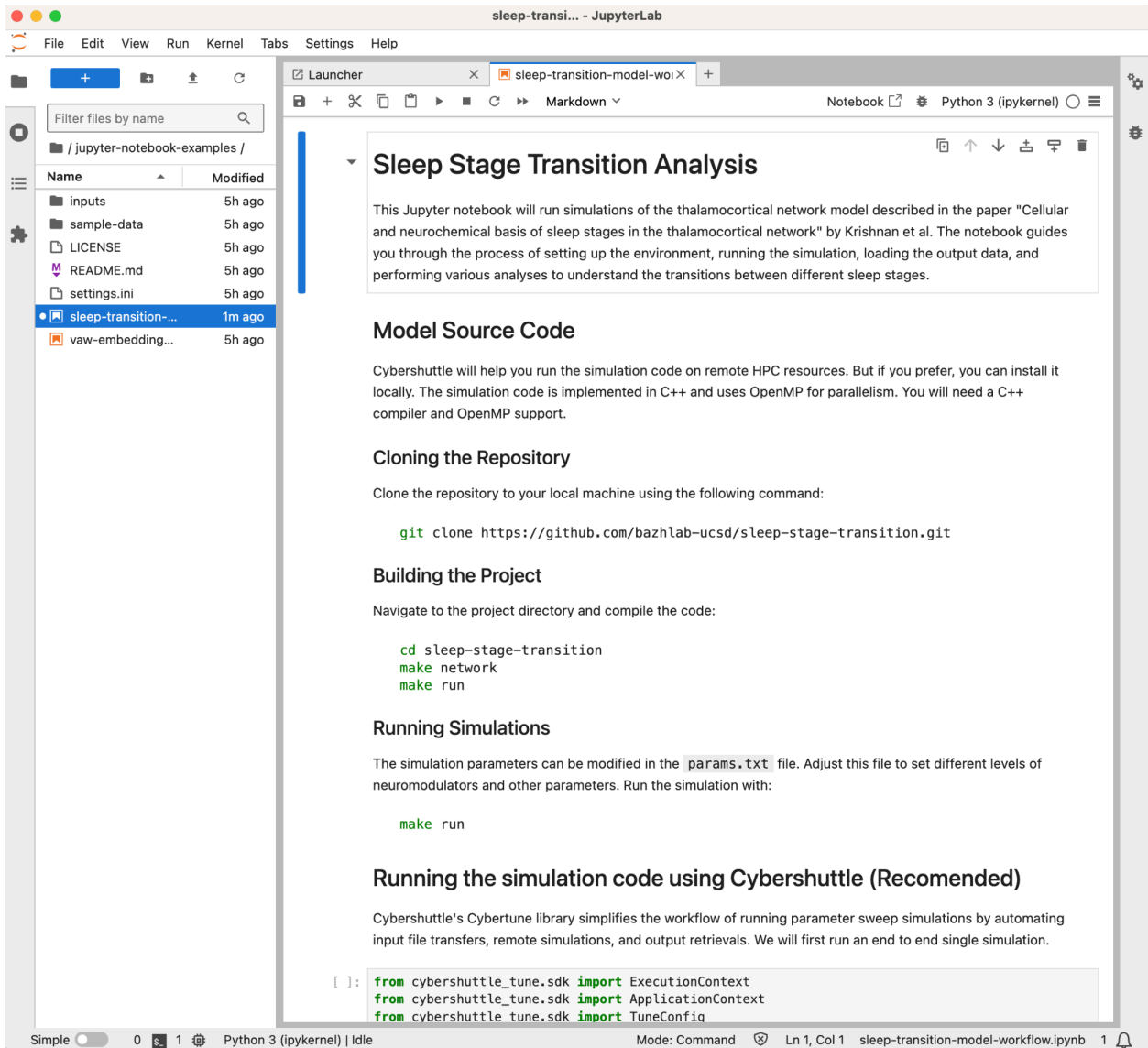
Image - Sleep Code Transition Notebook for the Tutorial

End the Notebook

1. When the notebook executions are done, close the notebook.
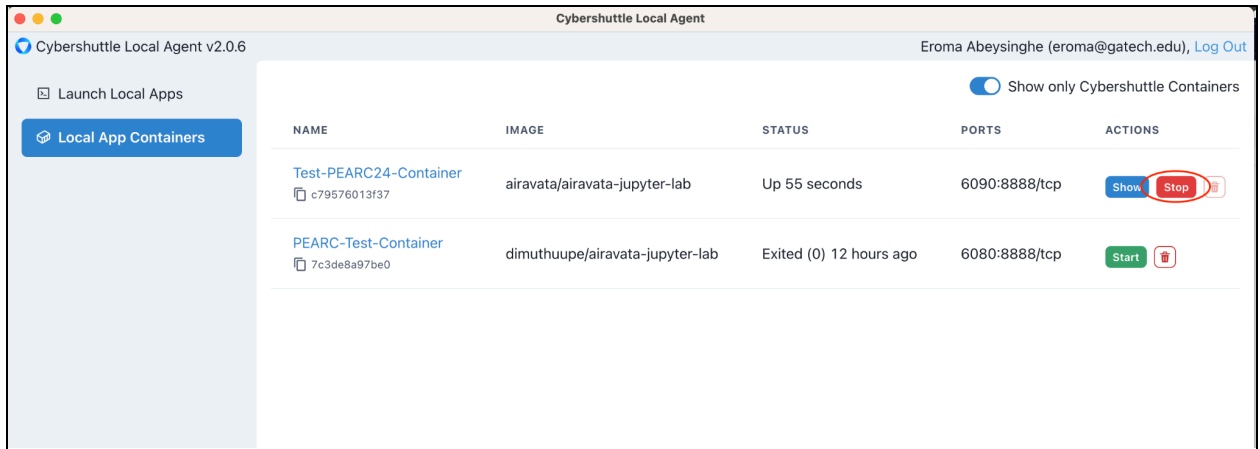
Image - Stop the Running Container

2. Stop the container.

Contact

For further communications and collaborations on Cybershuttle,
use **ARTISAN@groups.gatech.edu**