JupyterHub Setup Guide

Introduction to Python Programming for Machine Learning & AI

Chair of Information Systems, Humboldt University Berlin

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Introduction

The tutorial materials typically consist of Jupyter notebooks. We will make these materials and the tutorial recordings available via Moodle.

You are encouraged to familiarize yourself with the concepts of Jupyter notebooks. Introductory materials are available on the course Moodle page as well as on the web and on YouTube.

The recommended way to run Jupyter notebooks is to use the remote environments provided by the Humboldt-University of Berlin on JupyterHub. The following slides explain the steps necessary to set up this service, in depth.

Other cloud options include Google Colab and Amazon AWS. If you are comfortable installing software on your private computer and are willing to do some configuration work you can also execute Jupyter notebooks locally on your computer using JupyterLab or Visual Studio Code. This software is free to use and you do not need an account with Google or any other cloud provider. Note however, that the chair will not be able to provide technical support if you choose a different option than JupyterHub.

Step 1: Download the ADAMS repository to your computer

Install Git and optionally GitHub Desktop

https://git-scm.com/
https://desktop.github.com/ (optional)

Clone the GitHub repository

Open the GitHub Desktop App and clone the repository from our URL ...

... or type into the terminal:

```
git clone https://github.com/Humboldt-WI/adams
```

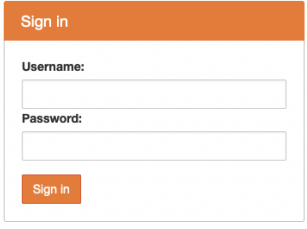
Step 2: Set up the HU VPN and visit JupyterHub

Set up the HU VPN following the instructions from the CMS

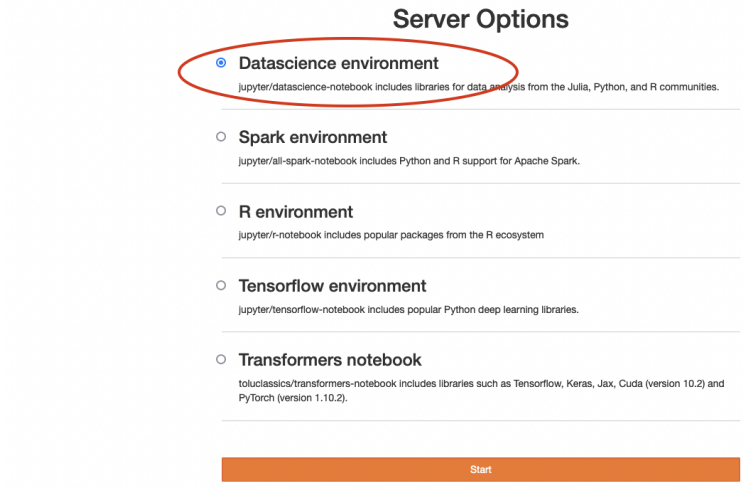
https://www.cms.hu-berlin.de/en/dl-en/netze-en/vpn/ssl-vpn/ssl-vpn

Visit the HU JupyterHub and log in with your HU credentials

1. Connect to the VPN and open JupyterHub: https://jupyterhub.cms.hu-berlin.de/
2. Type in your username and password as used in Agnes into the login form:



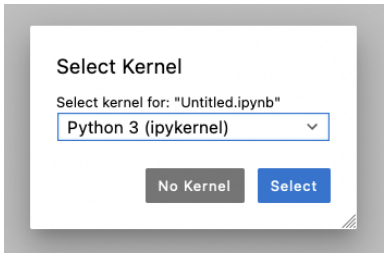
Step 3: Start the “Datascience environment”



Step 4: Select kernel

Select Python 3 kernel

You should now be greeted by a classic JupyterLab environment and prompted automatically to select a kernel. We will be using Python 3, so please go ahead and select “Python 3 (ipykernel)”. If you’re not prompted, just click on the Python 3 thumbnail in the section “notebook”.



Step 5: Upload files

Locate files on your computer

The Moodle page contains all required files for the course. Download them to a directory on your computer and locate it.

Upload files to JupyterHub

Click on the upload symbol in the top left of JupyterHub: 

Then select the desired files from your local directory and upload them.