



Tensorflow Tutorial - SODA-OPT

In this section you will learn how to use our compiler frontend to perform hardware software partitioning of high-level applications and automatic optimization of selected kernels.

Instructions for docker users

Download this project on a machine capable of running docker containers

```
git clone https://github.com/pnnl/soda-opt
```

Navigate to the tutorial folder

```
cd soda-opt/docs/tutorials/tensorflow/docker-version
```

Update/download the `soda` docker image

```
docker pull agostini01/soda
```

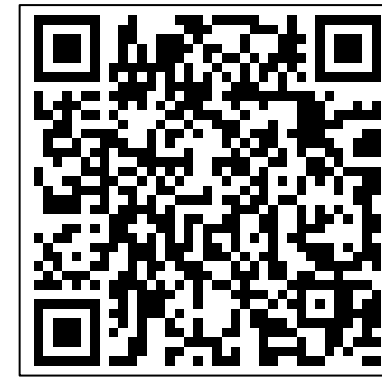
Create a python environment with needed dependencies

```
# Option 1 - using virtualenv
# with virtualenv, vscode current_project_root_folder must contain the .venv_soda folder
virtualenv .venv_soda
source .venv_soda/bin/activate
pip install tensorflow-cpu pandas lxml ipykernel

# Option 2 - using conda
conda create --name soda tensorflow-cpu pandas lxml
conda activate soda
```

Enter the tutorial directory with vscode or another tool capable of rendering jupyter notebooks.

```
# Open this folder with vscode
code soda-opt/docs/tutorials/tensorflow/docker-version
```





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A group of little tutorials to introduce each aspect of the PandA Bambu High-Level Synthesis tool individually. Learn only what you need and take the best from the tool.

High-Level Synthesis 101

- Introduction to High-Level Synthesis  [Open in Colab](#)
- Kernel Offloading Quick Start  [Open in Colab](#)

High-Level Synthesis 102

- Integrate external IPs with HLS generated designs  [Open in Colab](#)

Non-Docker users: <https://github.com/pnnl/soda-opt>
navigate to docs/tutorials/tensorflow/docker-version-executed/tutorial.ipynb

Non-Docker users: <https://github.com/ferrandi/PandA-bambu/tree/dev/panda/documentation/bambu101>
navigate to documentation/bambu101 in dev/panda branch