Software specifications

| Chapter number | Software required (With version) | Free/Proprietary | Download links to the software | Hardware specifications | OS required |
|-------------------|---|------------------|---|---|----------------------|
| 1 - 8 | PyTorch | Open source | http://www.pytorch.org | Single board computer to multi cluster cloud | All popular OS |
| 3, 8 | Docker | Open source | https://www.docker.com | Single board computer to multi cluster cloud | All popular OS |
| 1 - 8 | CUDA | Free | https://developer.nvidia.com/cud a-downloads | Single board computer to multi cluster cloud | All popular OS |
| 8 | Flask | Open source | http://flask.pocoo.org/ | Single board computer to multi cluster cloud | All popular OS |
| 8 | ONNX | Open source | https://onnx.ai/ | Single board computer to multi cluster cloud | All popular OS |
| 8 | MxNet model server | Open source | https://github.com/awslabs/mxnet -model-server | Single board computer to multi cluster cloud | All popular OS |
| 8 | RedisAI | Open source | https://oss.redislabs.com/redisai/ | Single board computer to multi cluster cloud | All popular OS |

Detailed installation steps (software-wise)

- 1. **PyTorch**: If you have CUDA and cuDNN installed, PyTorch installation is simple (for GPU support, but in case you are trying out PyTorch and don't have GPUs with you, that's fine too). PyTorch's home page (https://pytorch.org/) shows an interactive screen to select the OS and package manager of your choice. Choose the options and execute the command to install it.
- 2. **Docker**: Docker is available for all popular operating system platforms. Detailed installation for each OS can be found at documentation page at https://docs.docker.com/.
- 3. **CUDA**: Nvidia's CUDA toolkit is available for all popular OS. To install CUDA on your system, you will need a CUDA enabled GPU. Detailed installation steps can be found at https://docs.nvidia.com/cuda/.
- 4. **Flask**: Flask can be installed using pip, just like any other Python package: pip install flask.
- 5. **ONNX**: ONNX can be installed using pip, just like any other Python package: pip install onnx.
- 6. **MXNet**: The MXNet package can be installed via pip just like any other Python package: pip install mxnet.
- 7. **RedisAI**: Detailed installation steps can be found at, https://oss.redislabs.com/redisai/.