

dunetpc - Task #19936

Change FD CNN to use TF

05/13/2018 10:11 AM - Tingjun Yang

| | | | |
|------------------------|--------------|------------------------|------------|
| Status: | New | Start date: | 05/13/2018 |
| Priority: | Normal | Due date: | |
| Assignee: | Tingjun Yang | % Done: | 0% |
| Category: | | Estimated time: | 0.00 hour |
| Target version: | | | |

Description

We would like to change the FD CNN model to use the TF to improve speed and to keep up with the latest development.

I think there are two steps:

1. Apply the ProtoDUNE TF model to the FD and evaluate its performance.
2. Retrain a TF model for the FD.

History

#1 - 05/13/2018 10:13 AM - Tingjun Yang

Here is information from Leigh:

```
if ((fNNetModelFilePath.length() > 5) &&
    (fNNetModelFilePath.compare(fNNetModelFilePath.length() - 5, 5, ".nnet") == 0))
{
    fNNet = new nnet::KerasModelInterface(fNNetModelFilePath.c_str());
}
else if ((fNNetModelFilePath.length() > 3) &&
         (fNNetModelFilePath.compare(fNNetModelFilePath.length() - 3, 3, ".pb") == 0))
{
    fNNet = new nnet::TfModelInterface(fNNetModelFilePath.c_str());
}
else
{
    mf::LogError("PointIdAlg") << "File name extension not supported.";
}
```

If you give it a .nnet file it runs Keras, if you give it a .pb file it runs TF

An FD version of the definition in here would be appropriate: `dunetpc/fcl/common/featurelabelingmodules.fcl`

The only definition there at the moment is the protoDUNE one

I am going to give it a try.