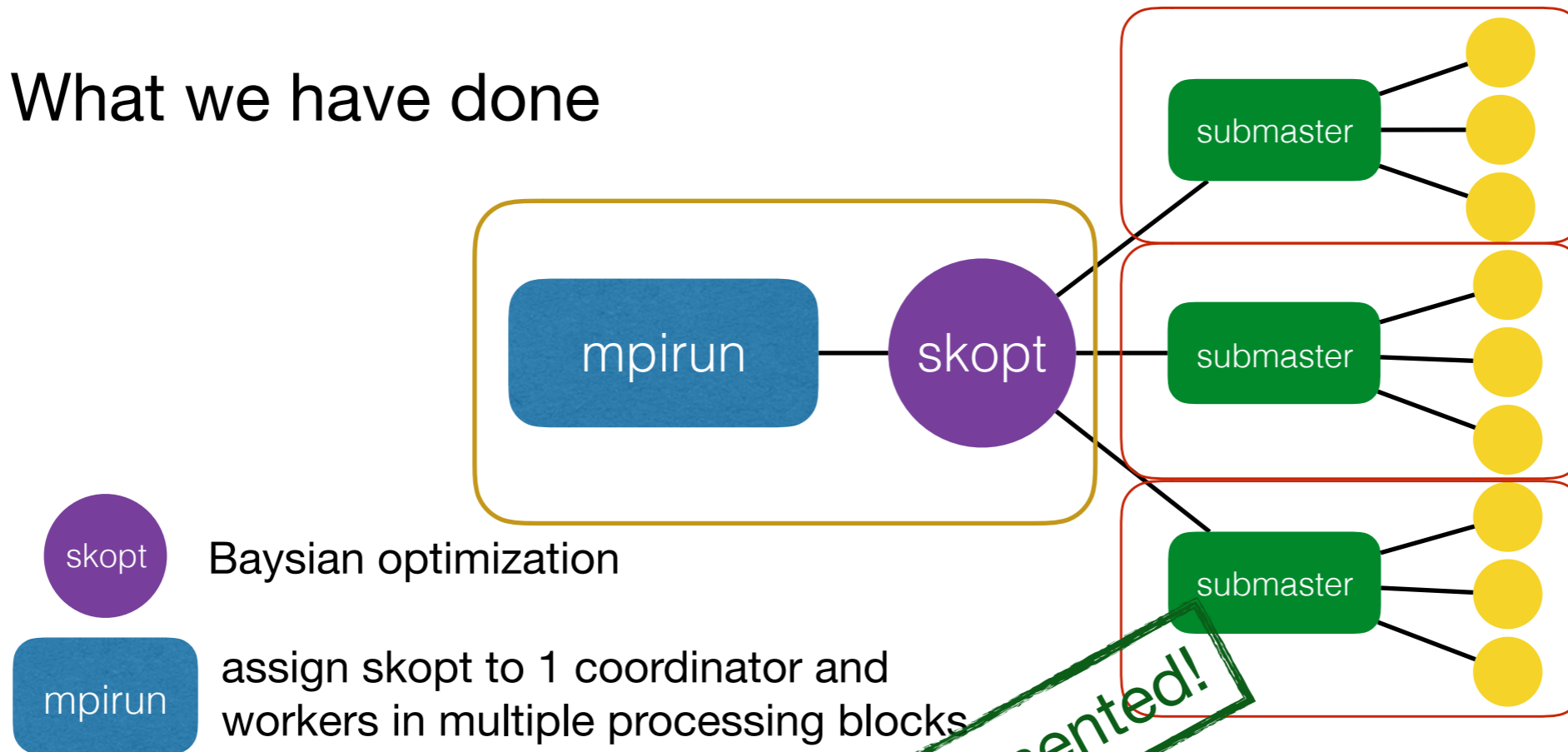# DISTRIBUTED TRAINING FOR HYPERPARAMETER OPTIMIZATION

Thong, Dustin, Antonio, Jean-Roch, Maurizio

2nd Patatrack Hackathon

24 January 2018

What we have done

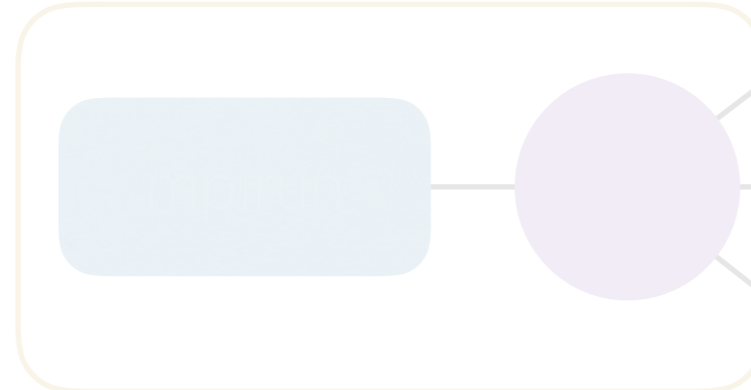skopt — Baysian optimization

mpirun — assign skopt to 1 coordinator and workers in multiple processing blocks

Framework implemented!

Coordinator (process 0)

```
while True:
  wait()
  ask()
      #make model config
  assign()
      #send to block
```
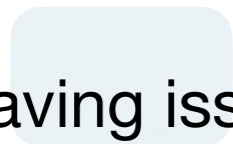
Processing Block (all others)

```
while True:
  wait()
      #MPIManager -> train
  send()
      #send to communicator
```

Challenges ahead

- Having issues with Tensorflow backend interaction with MPI training

  - It hangs when initializing the model to be trained

- GPU memory allocation with Tensorflow still needs to be configured.

- Profiling with nvprof / other tool(s) TBD.