

Y4 Project meeting 10 record (Week 11)

Date and time: 10/12/19, 14:10-15:15

Attended by: Guy, Harry and Hin

Discussed:

1. Slow neural net running and Guy's suggestions

- Decrease batch size
- Take out the pre-main sequence points (<1Gyr)
- Check whether using single precision
- Use google collab to estimate runtimes and to check whether the neural net is working properly.

2. Harry and Hin are now collaborators on the Interstellar project (Github)

a.

- Tars: manages data
- Murphy: works using a grid of neural networks

b.

- Training grids containing diffusion (see: Week 11 meeting notes)
- Making changes to Interstellar (see: Week 11 meeting notes)
- File format to send Guy for files using Interstellar (see: Week 11 meeting notes)

3. HBMs and Issues therein

- full rank ADVI: turns a sampling problem into a minimization problem (for more information on how to find the lines in Interstellar corresponding to this and for more information, see: Week 11 meeting notes)
- Guy is currently drawing values from a Beta distribution
- Brief Beta function discussion
- Potentially issues in the sampling come from the sampler trying to explore all parameter space but we don't have data for all parameter space.
- 000_bestmode.h5 is one of the best models in the Interstellar which we can have a look at

4. Seminars

- It's about presenting where the project is and where we hope it to be. (for more on this discussion see: Week 11 meeting notes)

To do:

Students:

- Keep reading papers.
- Try running neural nets on google collab (both for training and for estimating run durations + determining whether it's working properly i.e. train for 10k epochs and then check how it is doing).
- Figure out and tell Guy how we want to use Interstellar (if we don't want to use RDS and all that Guy can mound RDS, create the data frame and pickle it and then give us the pickled file)

Tutor: reminders

- Supply some pointers about where to be in trying to mount RDS
- Create a csv/pickle from Tanda Li's M67 grid as a precaution in case we want to work over Christmas but have issues getting Interstellar and RDS working (if this is do able we can arrange a time before the end of the week for a handover of the grid via USB).

Next meeting: 13/01/20 (Mon) 14:00 in Guy's office

Recorded by: Harry