Job Process

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Task | Subtask | Type | Description |
| 1 | Model fitting | |  |  |
|  | 1 | Launch\_model | .sh | Creates a job for each model and create job to compile chains once all chains have finished. |
|  | 2 | Launch\_model | .pbspro | Specify attributes of the model fit job (e.g. resources) & job structure (i.e. array). Runs shell script which runs R script. |
|  | 3 | Run\_model | .sh | Runs the R script for the model fitting (once per chain) |
|  | 4 | Run\_model | .R | Core script responsible for model fitting |
|  | 5 | Compile\_samples | .pbspro | Specify attributes of the compilation job (e.g. resources) Runs shell script which runs R script to compile chain samples. |
|  | 6 | Compile\_samples | .sh | Runs the R script that compiles samples. |
|  | 7 | Compile\_samples | .R | R script that combines all chains into single stanfit object. |
| 2 | Calculate matrices of log likelihoods | | |  |
|  | 1 | launch\_loglik | .sh | Submit job to queue that calculates a matrix of log likelihoods for each model. |
|  | 2 | launch\_loglik | .pbspro | Specifies attributes for job |
|  | 3 | run\_loglik | .sh | Runs the R script to calculate log likelihoods |
|  | 4 | run\_loglik | .R | R script that calculates the log likelihood of each choice given the model predictions |
| 3 | Loo objects | |  |  |
|  | 1 | launch\_loo | .sh | Submit job to queue that will create and save LOO objects (for comparison) |
|  | 2 | launch\_loo | .pbspro | Specifies attributes of job |
|  | 3 | run\_loo | .sh | Runs R script that creates the objects |
|  | 4 | run\_loo | .R | R script that computes leave-one-out cross-validation (LOO-CV) using the log-likelihoods |
| 4 | Model comparison | |  |  |
|  | 1 | launch\_comparison | .sh | Submit job to que that conducts model comparison |
|  | 2 | launch\_comparison | .pbspro | Specifies attributes for job |
|  | 3 | run\_comparison | .sh | Runs R script that does comparison |
|  | 4 | run\_comparison | .R | R script that compares the fit of each model (using LOO) Saves and prints the result. |

File Setup:

A screenshot of a computer

Description automatically generated

A screenshot of a cell phone

Description automatically generatedCyberduck login:

Terminal Commands

* Login:

ssh s4435475@tinaroo.rcc.uq.edu.au

Execute first scripts:

sh /30days/s4435475/Gaze-Cueing/0.1\_launch\_model.sh

sh /30days/<username>/exp\_2\_analysis/2.1\_launch\_loglik.sh

sh /30days/<username>/exp\_2\_analysis/3.1\_launch\_loo.sh

sh /30days/<username>/exp\_2\_analysis/4.1\_launch\_comparison.sh

Check status of jobs in queue:

qstat

Delete everything in queue:

qselect -u S4435475| xargs qdel

Logoff:

exit

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