

autoMAGIC Job Creation

autoMAGIC Workshop Padova

Jan Lukas Schubert

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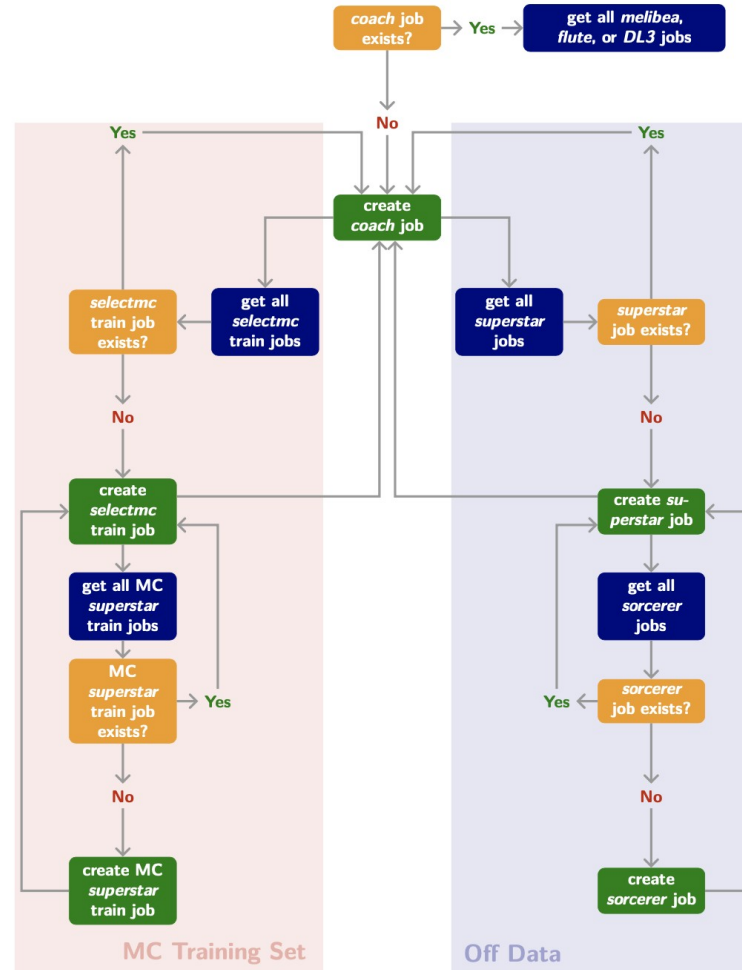
autoMAGIC Job Creation

- Core-concept: Use database!
- Basic idea: check if job with desired settings already exists in DB, else create it
 - For every MARS executable
 - Jobs laying the basis for other jobs have to be created first
- Off data search done before coach job creation
 - Based on cuts in analysis config

autoMAGIC Job Creation – Step by Step

- 1. Search all the On Data runs within the specified cuts
- 2. Get or create On star_superstar jobs
- 3. For each star_superstar On job, check if a suiting coach job exists, else create one
 - 3.1 Get or create selectmc job
 - 3.2 Search for Off data covering the az and zd bins of the RF
 - 3.3 Get or create star_superstar Off jobs

autoMAGIC Job Creation – Step by Step



autoMAGIC Job Creation – Step by Step

- 4. For each star_superstar On job, get or create a melibea job

- 5. Create a DL3 converter job
 - 5.1 Get or create a suiting mc_melibea job

autoMAGIC Off Data Search

- Off Data search is done during coach job creation
- Cut on MOLA significance
 - Only dark sources are considered OFF
- Cuts on weather, DC, etc.
- Split all available OFF sources in two subsets
 - Create two coach jobs

autoMAGIC coach job creation

- We always create two coach jobs at once, splitting the available Off sources!!!
- Coach jobs can be re-used
 - Saves Computation time
 - For each source there is always one RF without the source in the OFF sample
- Option **only_one_RF** overrides this
 - Useful if only little OFF data available

Common Errors/Problems

- It might happen that autoMAGIC does not find runs although they are in the DB
 - Check source name and time range: Is the data really in the DB?
 - Check your cuts
 - Make sure you allow for different MARS versions of superstar files!
 - Make sure the L3_Table is set to "" (for standard trigger analyses only) or filled properly in the DB!!!
 - Make sure the suiting MCs are in the DB

Create Jobs in Your Database

- Use command `automagic create_jobs analysis_bottom_top` to create the jobs
- AutoMAGIC will now create all jobs needed for your analysis that are not yet in the Database
- If you want to see more details, use the verbose option `-v`