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**Burrows-Wheeler Aligner – recommendations check up**

The Burrows Wheeler Aligner (bwa) tool is based on the Burrows Wheeler Transformation (data compression) algorithm and is designed to achieve a good balance between performance and accuracy. In the following I will try to comment on how well the recommendations of Torsten Seemann are implemented in the bwa tool.

The first recommended rule states to print something if the user does not supply any input. After installing and loading the bwa tool and only supplying “bwa” as user input this first recommendation is very well followed by the bwa tool. It refers to its manual page and furthermore gives a general overview on how to operate the module in case if help is needed.

However, while the first rule is thoroughly implemented I could not find either a help or version switch (rules 2 and 3). While the version switch is completely missing and the current version is just stated when calling “bwa” the lack of the help switch is compensated by the knowledge of the integrated manual page that gives an overview of all the functions and possible parameters for running bwa.

The fourth recommendation states that messages and errors should not be in the same output. This would complicate Unix pipes and bwa does not use stdout for messages and errors.

While bwa also does not hard code any paths I was unable to check if it always raises an error if something goes wrong. However, after connecting with some people that are more familiar to the topic they were quite sure that bwa is actually a tool that follows this recommendation.

The next guideline is to not pollute the path. Bwa does once more a great job here by using a master command to invoke sub commands. This is greatly displayed upon invoking “bwa” in the terminal where specifically the usage (bwa <command> [options]), commands, and a note of use are displayed.

Since the bwa tool is not depending on any other external tools there is no need to check for dependencies that could be needed. Thus, guideline nine is also fulfilled.

Last but not least, bwa is also not distributed in bare JAR files since it is not a JAVA program.