SCIENCE IN A FICTITIOUS MASTER'S PROJECT

Here are some stages in a typical Master's Project. Try to find scientific elements in each of these, and if you do, use one or more of the following words to characterize them.

- theoretical
- experimental
- mathematics
- science
- social science
- humanities

(1) *We are looking for a Master's Thesis student, from Computer Science or Engineering Physics, to analyze Swedish blogs. Diferent data mining techniques will be used to find connections and trends in collections of text documents. Proficiency in Perl, Java and Matlab is desirable. Contact mia@trendanalys.com*

(2) You meet Mia (D-96 without a degree) and Amir (writing a graduate thesis in sociology about group membership: *Modern tribes*) and get the job. Supervisor at KTH will be professor A, on the condition that you read his compendium on data mining.

(3) Text from one hundred thousand blogs is to be indexed and tagged. You have a Perl script that only needs to be modified, so you read a book on Perl.

(4) You need to program the cluster analysis yourself. You read a published research paper and a previous Master's thesis and decide to try three different methods.

(5) One of the methods is Singular value decomposition, which is based on Perron-Frobenius theorem about eigenvalues for non-negative matrices.

(6) Your programs all work, but they give different results and their run times differ. In your report you assess the methods.

(7) One of the results from your programs is that bloggers who write about travel often also write about beer and wine. The company Trend analysis has a tour company as a customer and Trend Analysis recommend that they arrange beer and wine tours, referring to your results.

(8) The sociologist Amir gets a paper, *Modern Tribes and Blogs*, published in *Social Behaviour*. This paper is based on your thesis, but comes to several conclusions that you do not believe are valid.

(9) The largest multinational advertising company asks you to work for them to sift out trends and connections from international blogs. These are to be used in targeted advertising in the entertainment industry. This will probably be a web service with cloud computing and you find this attractive.

(10) But how is computer security to be guaranteed in the cloud? You feel the need to investigate encryption algorithms at Google, Amazon and IBM.