

# Mathematical Programming: Modelling and Applications

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# INF580: guidelines for projects

- Chose a problem (a classical, well known one, e.g. MAXSAT, OR a more recent/sectorial one e.g. Hazmat routing problem).
- Introduce/describe it with a focus on its complexity class etc.
- Find a state-of-the-art model.
- Code it.
- Find benchmark instances or generate them (random graphs etc ...)
- Do some tests (a few instances using ampl or matlab or ...)
- Plot/present the results.
- Propose something new/different (of course, this is very very hard for classical problems) : for example an improved model or an improved algorithm for some specific instances.
- Do again some tests (model vs instances using ampl or matlab or ...)
- Plot/present the results that show the improvement (possibly).
- Draft a (well written) report
- In other words, the TD about DGP/1 would be a good project