

# Problem sets 1

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## 1 Interests in economics & data science

I would like to strengthen and acquire new skills in the following areas:

- Git and Github collaboration for efficient version control and collaborative work.
- Web scraping techniques to extract and analyze data from websites.
- Learning how to efficiently store and manage large data sets.
- Learning machine learning techniques for advanced data analysis.

I am planning to work one of these projects for this class:

1. Do leaders respond to vote share? This study aims to examine the effect of the president's vote share on the public goods provision. The literature examines the impact of road provisions on vote share. It is important to investigate this reverse causality since this new evidence will help reinforce institutions especially the behavior of the country president so that the public goods allocation will be efficient and only driven by developmental purposes.
2. Use machine learning techniques to optimally select a subsample for the Zero first stage test (Instrumental Variables).

I have ambition and I am motivated to contribute to the development of Africa through my research work. This desire fuels my interest in working with institutions that focus intensively on developing countries. Thus, after graduation, my goal is to contribute to international development institutions such as the World Bank. This is also one of the reasons I enrolled in this class to become more proficient in using GitHub, a platform widely used for collaboration in research institutions

## 2 Equations

$$a^2 + b^2 = c^2$$