



PhD topic #2: **Data sciences for improved education and employability in morocco**

The mismatch between higher education and the job market creates major social, political, and economical problems in many countries. Every year, many graduates are unable to find jobs. The resulting youth unemployment causes major social and political tensions. Paradoxically, at the same time, employers are unable to find candidates with the required skills. Such skill shortage results in reduced competitiveness and missed economic opportunities in these countries. The goal of this project is to use data science techniques to analyse skill mismatch in Morocco and develop algorithms that suggest education paths to students that maximize their chances of employment. The student will collect and analyse textual data such as job ads and university curricula. The student will also develop graph algorithms that find education paths that maximize a student's chances of finding a job while satisfying students' preferences. The student will frequently meet employment stakeholders in order to incorporate their feedback and help them benefit from research results.

- The doctoral candidate will be supervised by Dr Ghita Mezzour.
- Applicants must have a Master (or equivalent) in computer science or equivalent field.
- Good skills in data science (particularly in natural language processing) and a good command of English are required. Prior research experience is viewed positively but is not necessary.
- Applications should be emailed to ticlab-admin@uir.ac.ma and doctorat@uir.ac.ma