Evolutionary Algorithms (EAs) are one of the most powerful techniques to solve many complex optimization problems. However, an efficient execution requires much computational power depending on the actual application. Therefore, many researchers in industry as well as in academic domains focus on parallelization of Evolutionary Algorithms. In the literature, three models for parallel EAs, namely the global model, the grid model and the island model are introduced [1].

In this thesis we will design and implement a framework for parallel EAs according to the above models based on two cutting-edge technologies, namely containers and microservices. In order to validate our design and architecture, we will integrate the EA GLEAM (General Learning Evolutionary Algorithm and Method) into the framework [2]. It will be evaluated using some benchmarks.

References

- Student of computer science, electrical engineering, mechanical engineering or related disciplines.
- Experience in Java and Linux
- Independent and creativity at work as well as interesting in exploring new technologies are desirable
- **Helpful:** previous knowledge in:
  1- Computational intelligence especially evolutionary algorithms
  2- Container and microservices technologies
  3- C and python

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