



Assignment 4

Research Assignment Spring 2022 (2-00-01)

The research assignment is an important part of the PSE course. The list of research topics is given below. Please take note of the following instructions first:

- You should email me your topics of choice – as a prioritized list of **three** topics – **by Friday 10 Tir**.
- Each of the topics is either intended for one student, or a team of two. The number in parentheses shows the default size of the research team for each topic. Students who intend to work alone are allowed to select a team topic, but they should realize that they will be expected to work harder (you will get extra points, however).
- If you'd prefer to work on a topic other than those listed below, you can include it on your list of selected topics; if the title of your proposed topic is not expressive enough, a proper explanation of the topic should also be provided.

The topics will be assigned to individuals/teams **by Saturday 11 Tir**. A research starter package for each of the topics has been made available [here](#); each package contains several resources that are intended to start you off on your research. Please note that you may not need to use all of these resources; on the other hand, you will **definitely** need to complement them with other resources: you should study the list of references at the end of each resource for other potential resources.

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1. Machine Learning Design Patterns: Survey and Analysis (2)
 2. Patterns for Distributed Systems: Survey and Analysis (2)
 3. Patterns for Agent-Oriented Systems: Survey and Analysis (2)
 4. Patterns for Self-Adaptive Systems: Survey and Analysis (2)
 5. Service-Oriented Patterns: Survey and Analysis (2)
 6. Security Patterns: Survey and Analysis (2)
 7. Domain-Driven Design Patterns: Survey and Analysis (1)
 8. Patterns for Model-Driven Development: Survey and Analysis (1)
 9. Patterns for Game Development: Survey and Analysis (1)
 10. Patterns for Real-Time and Embedded Systems: Survey and Analysis (1)
 11. Pattern-Oriented Software Development: Survey and Analysis (1)