Nspyre is the technical specialist in the area of automation. We are constantly looking for innovation, not only in solutions for our customers but also within the organization itself. If you think that you have what it takes for one of our challenges, sign up now for a meeting about possible master projects at Nspyre. Contact via rachid.kherrazi@nspyre.nl

MASTER PROJECT IN THE AREA OF MODEL DRIVEN ENGINEERING

Model Driven Engineering has become a mature software engineering methodology. MDE has, among other things, as a goal to improve the productivity and quality of the software (engineering process). MDE is a model driven development technique, which means that various kinds of models are used throughout the development process. These models describe the desired solution at a very high level of abstraction and are transformed to a model with a lower level of abstraction. These higher level models enable the verification of all kinds of properties. Finally, the software code can be generated automatically from the models based on further transformations.

The goal of this research is to develop technologies that use models to automatically create test cases. This use of MDE is commonly referred to as Model Based Testing or MBT. We would like to develop a basic infrastructure to support MBT in Eclipse/EMF environment. This infrastructure should have the potential to support at least the capabilities offered by existing MBT tools, such as Microsoft Spec Explorer and Model Unit, and possibly more.

Once this infrastructure is available and its viability has been demonstrated, we would like to use it as a basis for further investigations in MBT and its applications. Possible topics include, but are not limited to:

- Use of high-level models in MBT (e.g., SysML, AADL, etc.)
- Use of related Eclipse Modeling Framework tools in MBT (e.g. GMF, QVT, ETL, etc.)
- Combination of MBT and formal verification
- Application of statistical testing in MBT
- (Re)use of existing models for MBT

If you are looking for a master project on the topic of MDE, then Nspyre offers you the possibility to successfully complete your studies in this area. As promising computer science student you get the opportunity to gain knowledge and experience about new and innovative technologies, languages and tools. Our guidance, training and coaching while executing your assignment will guarantee results that you can be proud of. And maybe your project will be the start of a further career at Nspyre!

- Are you curious, do you want to both research and experiment with as well as realise and implement;
- Are you interested in state-of-the-art software engineering tools and methodologies;
- Do you have knowledge and skills in the areas of Java/C#, Junit, NUnit, Eclipse, EMF;
- Are you interested in methodologies such as MDE and MBT

Send your CV and a short motivation to rachid.kherrazi@nspyre.nl or arjan.van.der.meer@nspyre.nl.