

2x Java Developer for a Graphical Editor

Department of Computer Science, University of Bristol, United Kingdom

We are looking for two part-time Java developers to work on Sketch BDRML, a graphical editor for a multi-agent algorithms modelling language.

You will get a chance to significantly affect early development of the editor and to work with scientists and industry collaborators from the field of multi-agent systems and swarm robotics.



Project background

One of the major challenges in developing multi-agent systems comes at the control algorithm design stage. Standard modelling languages, such as UML, are unable to fill the need of software designers to represent in a single diagram how agents behave, how they use data and how they interact with each other and with the environment. The Behaviour-Data Relations Modelling Language (BDRML)¹ was created to address this challenge, allowing for design of safe and efficient decentralised systems.

Sketch BDRML (SBDRML)² is a free editor that allows its users to create and share BDRML diagrams. The aim of this project is to extend the current version (0.5) of SBDRML, focusing on features that have been identified as important based on feedback that we have received. We have partnered with Thales Group, an international leader in autonomous systems engineering. A member of Thales research team will consult on the project, allowing us to focus on features that are likely to be useful to end-users.

About you

You are independent but also play well with others. You are not afraid to take ownership of tasks and are able to work in an agile development environment.

You have the following skills:

- Experience with Java development. JDK 8, JavaFX.
- Proficiency in git
- Familiarity with the Unix command line
- Familiarity with the Model-View-Controller architecture
- (Good to have) Familiarity with JSON and JSON parsing in Java
- (Good to have) Apache Maven
- Knowledge of relevant software engineering design patterns (Observer, Factory, etc.)

¹ <http://swarmdesign.lenkaspaces.net/bdrml/>

² <http://swarmdesign.lenkaspaces.net/sbdrml/>

- Knowledge of good software development practices

The work can be done remotely. You will be expected to work approximately 16 hours per week. About 8 of those hours will be pre-agreed "collaborative working" time, during which you will be expected to be available on Slack. You should also be able to attend regular project meetings at the University of Bristol, either in person or via Skype.

How to apply

Please send your CV and Cover letter, highlighting past experience and your technical skills, to **l.pitonakova@bristol.ac.uk** . Links to completed projects and to your code examples are a plus.

The application deadline is 5pm, 4th January 2019. Interviews will be held on 8th January. The project is expected to start on 14th January and continue until March 2019.

You may send informal questions to Lenka Pitonakova, l.pitonakova@bristol.ac.uk