The aim of the OU ANALYSE project (http://analyse.kmi.open.ac.uk) is to increase the retention rate at the Open University and at the same time to improve the quality of education. Internet technologies enable universities to offer their students educational resources online and, at the same time to collect information about the use of these resources. By analysing students interactions with the virtual learning environment it is possible to identify those who might be at risk of failing the course and offer them well-targeted additional support.

Our predictive models use data from the virtual learning environment, student performance during the course, legacy information, and the rules of the course to predict at-risk students as early as possible during the presentation. The analysis aims at identifying students for whom the additional support may help. By applying machine learning algorithms we develop predictive models that identify patterns of behavior typical for potential failure in the course.

We are looking for a Research Assistant or a Research Associate (depending on qualification) to work on this project. The appointment will be made on the Academic Grade 1 Salary Scales for Research Staff, ranging from £28,098 – £31,604 pa depending on qualifications and experience with the contract up to 31 December 2018.

Required skills:
- Experience in programming Java/C#/Python (or any other object oriented language)
- Experience with designing and implementing of web applications, ability to write a prototype of a solution
- Knowledge or basics of programming with some of the languages used for data science: preferably R, Python,
- Knowledge of SQL both for designing the databases and writing optimized and complex queries
- Ability to independently and proactively define solvable solutions to problems
- Deploy and maintain the solution in the production environment
- Ability to work in a team, contribute to code review, knowledge of working with a versioning system (e.g. GIT)

Desirable:
- Knowledge of principles of machine learning, data mining and statistics
- Experience with designing Data Warehouses and ETL process
- Knowledge of Java server technology
- Experience with unit-testing

For more information about the position, please contact zdenek.zdral@open.ac.uk.