Vice-Chancellor’s PhD Scholarships

**Synchronization, Optimization and Adaptation in Machine Learning**

## School of Computing and Digital Media

The huge amount of surveillance data does not allow effective human intervention. Using computer vision techniques, it is possible to solve some isolated tasks, but more complex behaviour analysis within the visual scene is not possible. We can also combine multiple algorithms, but the data pipelines face the difficulties related to concurrency management.

In the proposed research we a considering a two-level architecture, in which the machine learning algorithms are under the control of a reinforcement learning coordinator. This would bring additional gains by adapting existing data analytics pipelines to changes. In video analytics this enables different camera locations, multiple cameras, surveillance in motion, insufficient light, etc. In addition, it would retain the optimality of the workflows.

This approach is at the forefront of current AI research but requires a solid background in computer or data science and software engineering skills.

For informal enquiries about the project, please contact Prof. Vassil Vassilev (email: v.vassilev@londonmet.ac.uk).