

# Learning Teaching & Assessment Resources

## Authentic Assessment Exemplar:

Assessment Title	MLDG-Machine Learning Dataset Generator
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Module Title that Assessment Delivered on	Applied Machine Learning
Primary Student Cohort (Year on Programme / FT or PT or Both / UG or PG or AP)	

### Overview of Assessment (Max 100 words)

This assessment focuses on the development of a tool for generating student-centered datasets (using the MLDG - Machine Learning Dataset Generator) which are unique but fair to allow for both in-class and remote summative assessment for a final-year Machine Learning course, simultaneously. The results are encouraging and provide evidence that MLDG and the assessment approach used to promote a fair assessment with academic integrity for Machine Learning students. This tool and assessment approach could also be applied in other subjects such as databases thus having value outside of Machine Learning courses for the Computing Education Research community.

### What Change was Made to Assessment to Enhance its Authenticity? (Max 100 words)

Other than all students getting the same data set with same errors in a closed book setting within a lab, the students each got a subset of the same data set however it was modified for each student. Thus each student would not be able to use another students answers especially giving there was a time constraint. This allowed students to have a truly open book assessment where the goal was to examine their understanding of preprocessing in a more real world context. Some students prefer to sit the assessment in the lab and orders at home where they had their own equipment, mimicking how data scientists might work authentically.

### What was the Impact on Student Engagement / Performance? (Max 100 words)

Full paper at <https://arrow.tudublin.ie/diracon/17/> where 26 of the 27 students said the open-book assessment method should continue. The students were asked two questions, any positive or negative feedback. In the positive feedback, students suggested that it was a fair assessment, reduced anxiety and allowed students to focus on the tasks at hand rather than trying to debug errors. Examining the disadvantages, students cited concerns such as lack of time be it for the assessment or for time to upload the assessment.

### One Thing you would do Differently Next Time (Max 50 words)

Additional time would support students more when completing this assessment. Other than no significant challenges that were reported from the students during this study.

### Authenticity Indicators

