

Most Innovative Use of Technology in Assessment

WINNER

Bolton College



FirstPass

In September 2019, colleagues at Bolton College embarked on a tentative journey to discover if a computer could be trained to support teachers to assess student responses to an open-ended question; and if real-time feedback improved the quality of student work when responding to such a question. We have discovered that if we make use of natural language classification, natural language understanding and other tools a computer can indeed be taught to analyse and assess responses to an open-ended question. It is also possible to offer textual and graphical real-time feedback to students. Our work also enables teachers to create multiple classification models that can be used to support the formative assessment of numerous open-ended questions. The emergence of this new assessment tool enables teachers to make use of a richer medium for assessing their students. Traditionally, online formative assessment activities are undertaken using closed questioning techniques such as yes/no questions, multiple-choice questions or drag-and-drop activities. Whilst valuable, this is a rather narrow way to undertake formative assessment. Our solution enables teachers to pose open-ended questions which can be automatically analysed and assessed by a computer.

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Tata Consultancy Services Limited

Re-imagining e-assessments for Hearing impaired and deaf students

Tata Consultancy Services (TCS) is proud to have solved a challenge of providing equal opportunities to hearing impaired and deaf students with the innovative use of technology, in the context of assessments conducted for them.

Hearing impaired and deaf students continually face challenges in the space of learning. And assessing what they have learnt becomes an even greater challenge when there are not enough sign language interpreters to give quality time to each student.

While there exist various technologies in the assessment space for regular students, this disadvantaged community is not able to experience benefits of such technologies. Our research indicated that hearing impaired and deaf students have special needs of learning and assessments which present inherent

infrastructure and procedural challenges.

TCS responded innovatively to the strong need for an adaptable and cost-effective solution to address these challenges. Applying a design thinking principle and making best use of existing suit of product (TCS iON PAPER appliance), TCS envisaged a solution to conduct assessment for these students allowing the limited supply of signers to be used more efficiently. The appliance also facilitates e-Assessment in locations with poor internet connectivity, which is a challenge in many parts of India.

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Excelsoft Technologies Pvt Ltd

An AI-based tool to screen, assess and rank job applicants

SmartEval is an intelligent evaluation framework with Artificial-Intelligence and Machine Learning (AI+ML) support to handle large data loads with the highest accuracy. The tool enables HR professionals to collect applicants' education, experience, training, and skill development data for a job profile, define targeted scoring plans, and evaluate applications to generate a Rank list.

SmartEval is a complete end-to-end application supporting the Recruiters to build job-application forms with necessary data collectors, allow candidates to update data as per necessary validations, evaluate data against the scoring plan (personalized evaluation flow). Supports multi-tenancy and SaaS business models and deployment options (On-Cloud or on-premise) and provides integration with 3rd party job portals.

SmartEval is designed to reduce the application processing time and enable evaluation and ranking based on the tailor-made scoring criteria for each organization. It reduces administrative effort to conduct mass-scale recruitments. The intuitive UI allows non-programmers to design complex scoring logic with ease.

SmartEval reduces paper-trail (Application forms) footprints, administrative support required to maintain it as per document retention policies. Ensures better record & data management of candidates' records to comply with local laws - veteran credits for scoring purposes, demographic reports for affirmative action for minority groups, and a few others.

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Riiid Labs

AI Accelerating Learning

Within less than 10 questions delivered by an App, Riiid's AI is able to predict with 98% accuracy the score a learner would achieve in the 2½ hour TOEIC Listening & Reading summative test, not only on the overall test but by section. Based on this and student selected study options the App provides a learning plan for the student including their strengths and weaknesses. With each student interaction within the App the AI is updating the student progress and undertaking a knowledge tracing process enabling the student to see what they have completed and what they still need to study to reach their desired score. While the learner continues on their journey the AI monitors their level of engagement and will predict any likelihood that the student will drop out. The AI adjusts the learning to meet the learner's engagement level and will analyse what type of content or questions increases their level of engagement. The AI is using techniques derived in game theory with and dopamine-based challenges that will keep the learner on track to meet their learning goals. The outcome is learners study for longer within the App and can quickly and robustly increase their score.

Best Transformational Project

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Cirrus Assessment and Chartered Accountants Ireland



Debuting a digital exam platform to the time-honored establishment of Chartered Accountants Ireland was nothing short of a monumental task, but Cirrus did not shy away from the challenge.

Faced with the rising costs of testing centers and the fast-paced demands of a world going digital, Chartered Accountants Ireland knew they needed to make an enterprising decision to transform their institution. CAI is a prestigious organisation founded in 1888 and is the third oldest accountancy body in the world, dating back to before the Irish republic. They were traditional in the way they approached assessments, paper was always the way exams were taken.

Cirrus signed the contract with the Chartered Accountants in January 2019, with the deadline of delivering their first exams at the end of March, with the additional need to develop two bespoke question types for them. Cirrus has never backed down from a challenge and started immediately with gathering a team of experts for CAI. Cirrus understood that there was much at stake for CAI, both reputational and economic, and therefore when successfully implemented it could mean the complete metamorphosis from old tradition to the digital age.

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The British Council

British Council Hybrid Test Centre and Remote Invigilation Exam Delivery Solution

The British Council normally delivers around 120,000 high stakes session-based computer-delivered exams for its anchor client, ACCA, in test centres in 130 countries every quarter, however with the onset of the pandemic, British Council test centres closed and were unable to deliver exams.

In late June 2020 ACCA set British Council the challenge of providing a high-volume capacity planning and secure high-stakes exams delivery service, offering a hybrid of live remote invigilation (RI) and test centre invigilation, that could flex easily from session to session, based on market and candidate demand patterns.

On September 7th the live RI service was launched, a first for British Council. Working closely with ACCA we put in place a service to concurrently deliver up to 30,000 RI exams and up to 90,000 test centre exams, with the option for ACCA to alternate between the two modes as Covid restrictions changed worldwide in the run-up to the session.

The pandemic accelerated an existing British Council goal to provide RI as part of its Technology Enabled Delivery strategy, and the transformational change has positioned British Council to support clients with an agile hybrid delivery service that can flex to meet their needs for session-based exams.

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Royal College of Psychiatrists

Digital Transformation of Royal College of Psychiatrists Exams

Due to the COVID pandemic an urgent solution was required to enable trainee doctors to be assessed so they could progress to specialist training in psychiatry.

The Royal College of Psychiatrists set out an incredibly ambitious timeline to digitise the delivery of all its exams. The College strategy was to ensure that every junior doctor who needed to sit an exam would be offered the chance to do so before the end of 2020. We were advised that projects like this would normally take one-and-a-half to two years. To hit our target, we needed to squeeze the delivery into just five or six months.

Remodelling the delivery of the clinical exams for remote delivery was particularly complex. No-one had ever attempted to deliver this type of clinical assessment online before and there was no off the shelf software platform with all the capabilities they required.

Following several unsuccessful pilots, we were very close to cancelling the exams of hundreds of candidates, however we persevered and delivered a successful solution for both our clinical and written exams. Without these exams we would not have enough qualified psychiatrists coming through at a time when mental health is more important than ever.

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