

Intellegens to lead Consortium focused on 'Trustworthy AI'

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'Trustworthy AI' focus for new materials and chemicals project

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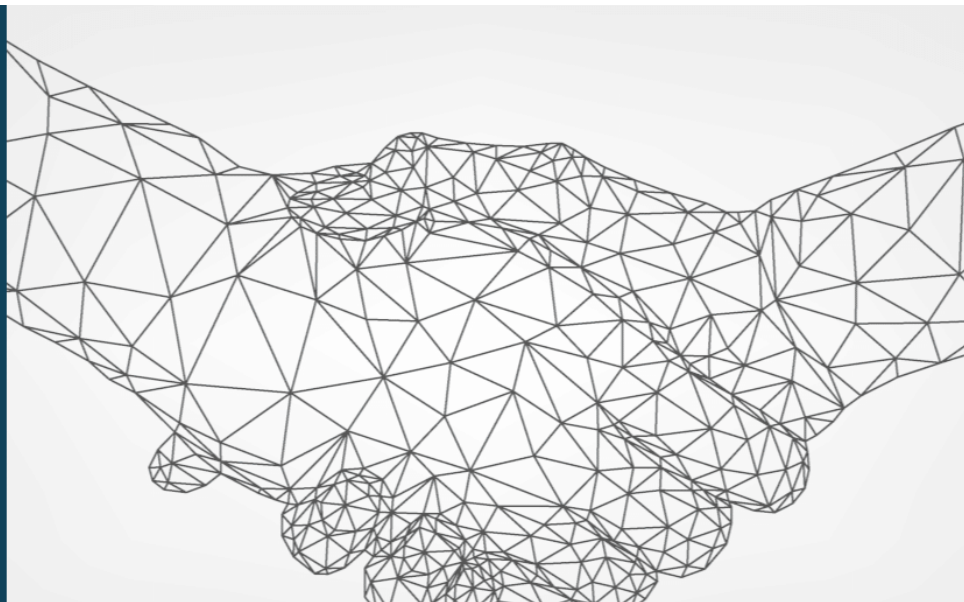
Project to help drive adoption of machine learning wins funding from Innovate UK

Cambridge, UK – May 3rd 2023 – Intellegens today announced that it will lead a consortium to help accelerate the adoption of artificial intelligence (AI) methods such as machine learning (ML) in the UK materials and chemicals industries. The initial phase of the project, funded by [Innovate UK KTN](#), part of [UK Research and Innovation](#), will study factors that limit use of this technology. It will also recommend steps to increase trust and drive their application of AI/ML to optimise vital products and processes while reducing energy and resource consumption in pursuit of net zero goals.

AI, particularly well-established ML methods, can enable chemical and materials R&D organisations to learn from their experimental and process data, guiding and accelerating the development of formulated products and the implementation of industrial processes. In large-scale operations, even small percentage changes in resource use or outputs can save millions of pounds and millions of tonnes of greenhouse gas emissions. But there are constraints on the adoption of AI. Notably, there is the difficulty of making changes in highly-regulated industries with long-standing practices, especially when it is sometimes hard for users to understand why AI methods are making particular recommendations.

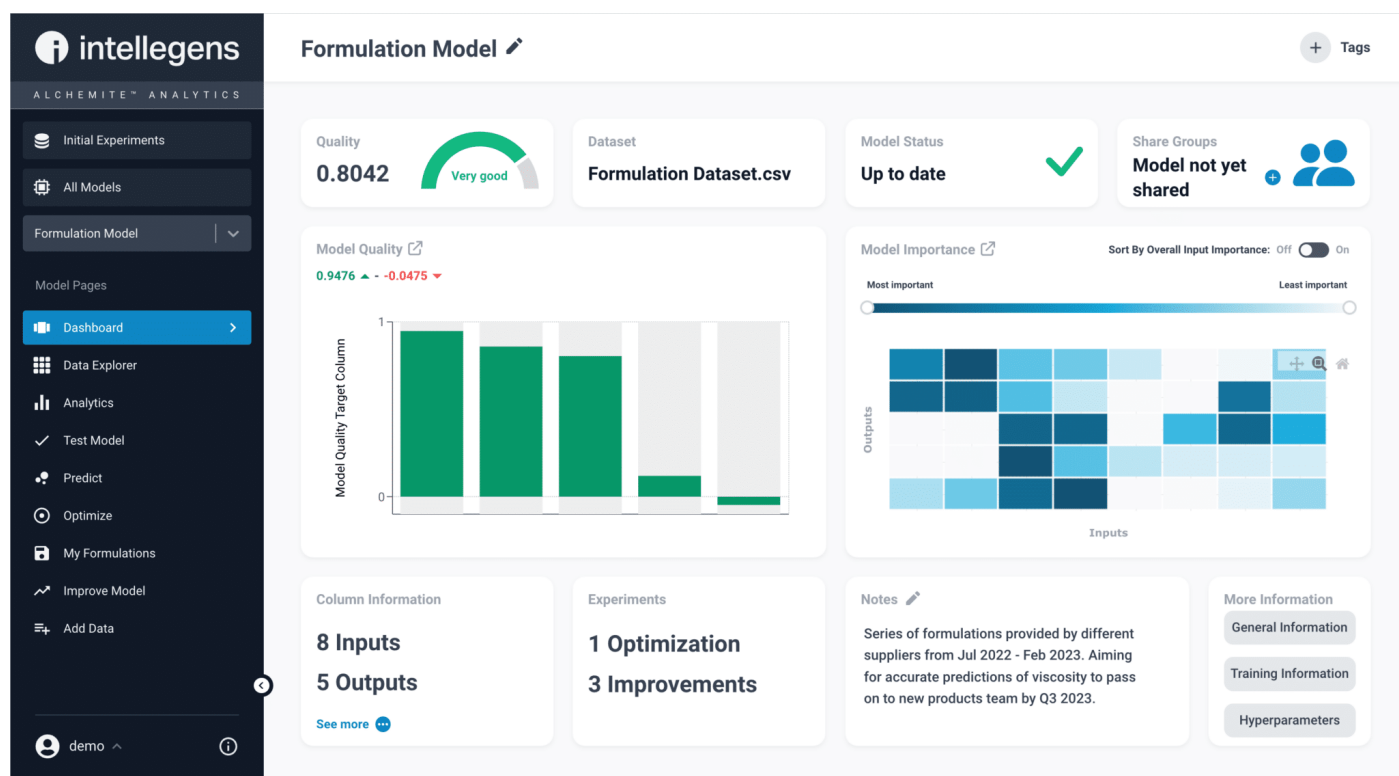
Initial consortium members include scientists from [Johnson Matthey](#), [Domino Printing Sciences](#), [Goodfellow](#), [Welding Alloys Group](#), the Universities of Cambridge and Leicester, and the [Henry Royce Institute](#) – the UK national institute for materials research. These experts will aim to understand the concerns limiting take-up, reviewing issues such as transparency, fairness, bias detection, safety, robustness, auditing and monitoring, compliance, and the need for human oversight in processes. They will explore solutions such as 'Explainable AI' tools that ensure the logic underlying AI models can be inspected by scientists and engineers.

**Trustworthy AI
Consortium:
accelerating
chemicals and
materials R&D**





Trustworthy AI Consortium launched, May 2023.



'Explainable AI' tools enable scientists to inspect an ML model, for example, to understand model quality or relationships between system inputs and outputs

This work is supported with funding won through the "[Accelerating trustworthy AI](#)" competitive process run by Innovate UK KTN, which is investing £21m in projects to enable adoption of trusted and responsible AI and ML technologies by UK industry. Intellegens welcomes contact from other organisations interested in participating in the Consortium. The project began on May 1st and will produce recommendations for further action within three months.

"Our long-term vision, shared with our consortium partners and supporters, is to accelerate the adoption of AI in materials and chemicals research," said Ben Pellegrini, CEO at Intellegens. "It is great to be recognised through the competitive funding process as an organisation that can play a strategic role in this process, which could have a significant impact on the competitiveness and sustainability of these vital industrial sectors."

About Intellegens

Located in Cambridge, UK, and a spin-out from the world-renowned Cavendish Laboratory at the University of Cambridge, Intellegens applies advanced machine learning to accelerate innovation in chemicals, materials, life sciences, manufacturing, and beyond. Case study examples include Rolls-Royce, AstraZeneca, NASA, Johnson Matthey, IFF, and Yili Group. Successful applications include alloys, chemicals, plastics, paints, coatings, food and beverages, drugs, and batteries.

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Supporting images

Screenshot of the Alchemite™ software.

Ben Pellegrini, Intellegens.

Trustworthy AI graphic.

Alchemite™ software in use.

Intellegens logo.

Available at www.intellegens.com/images/.