Alchemite™

Deep learning software
from Intellegens

Accelerate innovation
for materials, chemicals,
manufacturing, and beyond

intellegens

Applied machine learning

Why Alchemite™?

Extract more value from real-world, sparse, noisy data

Win with optimised formulations, products, and processes

Save time and cost with up to 90% fewer experiments

Deploy advanced deep learning for maximum impact

What is Alchemite™?

Based on algorithms originating at the University of Cambridge, Alchemite™ is deep learning software developed by Intellegens. It has unique capabilities to extract value from real-world, sparse, noisy data, where most machine learning methods fail.

Successful application areas include materials, chemicals, formulations, and industrial processes.

Whatever the system being studied, Alchemite™ fills in gaps in the data and generates a machine learning model that you can then apply to predict outputs or optimise inputs. It can also identify important relationships in the data and provide guidance on which set of experiments would most efficiently enable you to achieve your targets.
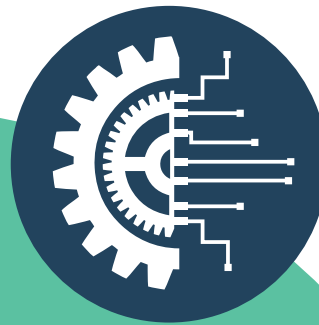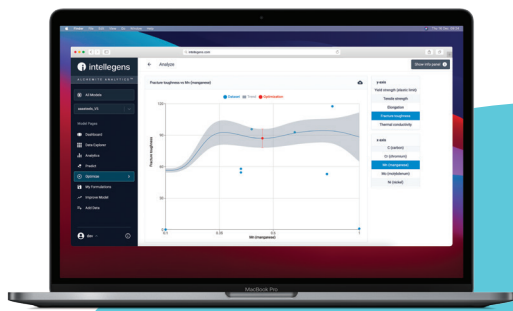
The result? You can apply advanced machine learning to accelerate innovation.

Customers say:

"Alchemite™ was able to converge on a solution with far fewer experiments"
AMRC

"It really expands the bandwidth of our data scientists"
NASA

"Alchemite™ identified novel formulations quickly and accurately"
Domino Printing Sciences

"We can make better decisions about which experiments we perform"
Lucideon

Alchemite™ has been successfully applied to optimise formulations of inks, paints, and speciality chemicals — more applications on the back cover.

See all case studies at Intellegens.com/casestudies

Making machine learning easy to deploy

Alchemite™ Analytics

Deep data insights on your desktop

For scientists and engineers

Guide experiments

Predict, design, optimise

Alchemite™ Engine

Power and flexibility for data scientists

Integrate Alchemite™ into your workflows

Advanced configuration and deployment
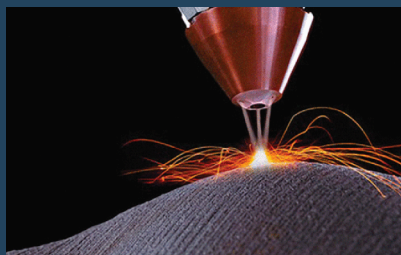
Alchemite™ Success

Apply our deep learning expertise

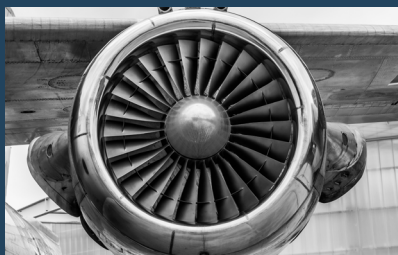**From 'getting started' support to full project management**

Key features

- **Handle sparse, noisy real-world data**
- **Optimise against multiple targets**
- **Provide confidence with accurate uncertainty quantification**
- **Make a fast start – Alchemite™ requires minimal assumptions**
- **Apply a lightning-fast, scalable method**
- **Learn from all available data in a single study**

Example applications

Additive manufacturing
A data-driven approach to reliable, repeatable AM processes.

Alloy design and development
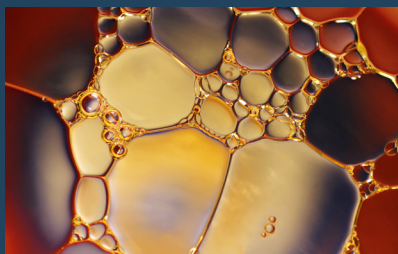Accelerate innovation and optimise processing.

Batteries
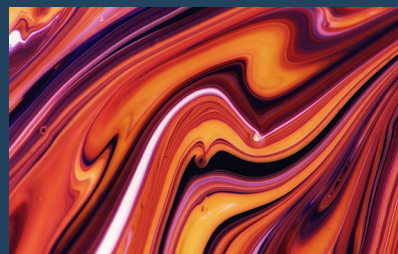Optimise battery formulations and pack design, enable battery management.

Drug Discovery
Find new candidates, support virtual screening, and focus experiment.

Chemical processes
Cut out trial-and-error and speed up discovery and development.

Formulated products
Make better use of experimental resources and get to market faster.

Plastics
Improve the design, blending, and processing of polymeric materials.

Manufacturing processes
Optimise processing parameters for improved quality and efficiency.

Adaptive experimental design
Better results from fewer experiments.

More at: Intellegens.com

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