



SERVICE GUIDE · 2026

Machine Learning

AI that learns from your data to predict, classify, and recommend.

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WHAT IS MACHINE LEARNING

AI that learns the patterns in your data

Machine Learning is AI that **studies your historical data to find patterns** — then uses those patterns to predict what's likely to happen next, classify new items into categories, or recommend the right next action. Deep Learning is the same idea, taken further, for the most complex problems.

THINK OF IT LIKE THIS

Imagine hiring an analyst who has read every record in your business — every transaction, every customer interaction, every outcome — and can instantly spot patterns no human could see. That's what a well-trained model does, on every new piece of data, all day long.

01**How It Works**

A plain-English overview

• We Study Your Data

We work with your historical data — what's worked, what hasn't, and the outcomes you care about most.

• The AI Learns

A model is trained to recognise the patterns that lead to the outcomes you want to predict, classify, or recommend.

• You Get Predictions

The trained system makes accurate predictions on new data, every day, integrated into your decisions and workflows.

02**What It Can Actually Do**

Real-world examples

• Forecasting & Demand Planning

Predict future sales, demand, or workload weeks or months ahead — so you can plan stock, staff, and capacity confidently.

• Recommendation Engines

Suggest the right product, content, or next action for each customer or employee — increasing engagement and conversion.

• Predictive Maintenance

Forecast when equipment is likely to fail before it does — scheduling repairs in advance, avoiding costly downtime.

• Customer Churn Prediction

Spot which customers are at risk of leaving early enough to do something about it — and act before they're gone.

• Fraud & Anomaly Detection

Identify unusual transactions, behaviours, or patterns the moment they happen — protecting revenue and reputation.

• Risk & Credit Scoring

Assess risk consistently and accurately across applicants, suppliers, or transactions — replacing slow manual review.

INDUSTRY USE CASES

Real scenarios, real outcomes

Below are examples of how Machine Learning & Deep Learning is being applied across different sectors and departments. Each one replaces hours of manual work or unlocks insight that was previously out of reach.

A

Sales, Marketing & Customer Insight

Understand customers, predict behaviour, act earlier

- **Lead Scoring**

A model ranks every inbound lead by how likely it is to convert — so sales focus on the best opportunities first.

- **Churn Prevention**

Identify early warning signs across behaviour, support tickets, and usage — triggering retention offers before they leave.

- **Customer Lifetime Value**

Estimate how much each customer is likely to be worth over time — guiding acquisition spend and retention investment.

- **Next-Best-Action**

For every customer interaction, the model suggests the offer, message, or action most likely to drive a positive outcome.

B

Operations, Finance & Risk

Forecast accurately, detect issues early, decide consistently

- **Demand Forecasting**

Predicts sales and demand across products, locations, and time periods — informing purchasing, staffing, and capacity.

- **Cash-Flow Prediction**

Forecasts inflows and outflows so finance can spot shortfalls in advance and plan working capital with confidence.

- **Fraud Detection**

Scores every transaction in real time, flagging suspicious activity for review and blocking the highest-risk cases automatically.

- **Credit & Risk Decisioning**

Consistent, explainable risk scoring for applicants, suppliers, or transactions — faster than manual review, fairer than gut feel.

C

Operations, HR & Specialised Models

Where pattern recognition transforms decisions

- **Predictive Maintenance**

Sensor and usage data predicts when machines will fail — letting you schedule repairs proactively and avoid breakdowns.

- **Image & Document Classification**

Deep-learning models that read, categorise, and route documents, images, or scans into the right workflow automatically.

- **Workforce Planning**

Forecasts attrition, sick leave, and seasonal demand — so HR and operations can plan recruitment and rosters in advance.

- **Natural-Language Insight**

Analyses surveys, reviews, support tickets, and emails — surfacing themes, sentiment, and emerging issues across thousands of items.

A CLOSER LOOK

How Machine Learning actually works

Behind every working model is a structured process — from preparing the right data to deploying predictions into your business reliably and responsibly.

- **1. Define the Goal**

We agree exactly what we're trying to predict, classify, or recommend — and how success will be measured.

- **2. Prepare the Data**

Historical data is gathered, cleaned, and shaped — combining sources and removing noise that would distort learning.

- **3. Train the Model**

The model studies the data to learn the patterns linking inputs to outcomes — iterating to find the best fit.

- **4. Evaluate & Validate**

We test the model on data it hasn't seen — measuring accuracy, fairness, and robustness before it goes live.

- **5. Deploy**

The model is integrated into your systems so its predictions reach the right places — decisions, alerts, or dashboards.

- **6. Monitor & Improve**

Performance is tracked continuously; when patterns shift, the model is retrained on fresh data to stay accurate.

05

What We Build For You

The key components of your system

- **Supervised Learning Models**

Models trained on labelled examples to predict outcomes — sales, churn, fraud, risk, classification — with measurable accuracy.

- **Deep Learning**

Neural network models for complex problems — image, language, or signal data — where traditional methods fall short.

- **Integration into Workflows**

Models are embedded into your existing systems — CRM, ERP, dashboards, internal tools — where decisions actually happen.

- **Pattern Discovery**

Unsupervised models that find natural groupings, anomalies, and structure in your data — even where you didn't know to look.

- **Model Evaluation**

We rigorously test models for accuracy, fairness, and robustness — so you know exactly how they'll perform in production.

- **Monitoring & Retraining**

We track model performance over time and retrain when accuracy drifts — keeping predictions reliable as your business evolves.

06

Oversight, Governance & Responsible AI

Built-in accountability — always included

- **Full Visibility**

See exactly what your Machine Learning & Deep Learning system is doing — every action, decision, and outcome — through a clear activity log.

- **Audit Trails**

Every action recorded with timestamp and reason — a searchable record for compliance and review.

- **Continuous Improvement**

Your system gets better over time. We review outcomes, identify improvements, and update it.

- **Guardrails & Boundaries**

Clear rules for what your system can and cannot do. Sensitive actions always require human sign-off.

- **Ongoing Monitoring**

We monitor performance over time, flagging anything unusual and ensuring continued accuracy.

- **Data Privacy & Security**

Your data stays yours. We follow rigorous practices and work within your security policies.

07

Hosting & Deployment

We handle the technical side — you focus on the results

Once your Machine Learning & Deep Learning system is built, it needs somewhere to live and run reliably. We take care of all of that for you.

- **Cloud Hosting**

Hosted on secure, enterprise-grade cloud infrastructure. Your Machine Learning & Deep Learning runs 24/7, scales with usage, maintained by our team.

- **Hybrid Setup**

Hybrid deployments combining cloud convenience with on-site control, tailored to your requirements.

- **On Your Own Systems**

If data must stay on-premises for compliance or security, we deploy your system entirely within your environment.

- **Ongoing Management**

Managed packages include monitoring, updates, performance tuning, and ongoing support as your system matures.

08

Consulting & Advisory

We help you figure out what you actually need

Not sure where to start? Most organisations know Machine Learning & Deep Learning could help — but not where, how, or what to prioritise. We work through that with you honestly, without jargon.

- **Discovery & Scoping**

We understand your operations, challenges, and goals — then identify where Machine Learning & Deep Learning delivers the most value first.

- **Roadmap Planning**

A phased plan — starting with a focused pilot that delivers early results, then expanding as confidence and ROI grow.

- **Feasibility & Risk Assessment**

An honest view of what's achievable, the risks involved, and a realistic timeline. No overpromising, no jargon.

- **Stakeholder Alignment**

We help communicate the plan internally — leadership, operations, compliance, IT — with materials for non-technical audiences.

09

Training & Adoption Support

Making sure your team feels confident

The best system only creates value if your team knows how to use it, trust it, and get the most from it. We provide tailored training and support to make adoption smooth.

- **Team Onboarding**

Practical, jargon-free sessions for people working alongside the Machine Learning & Deep Learning system every day — what it does and when to step in.

- **User Guides & Playbooks**

Clear, plain-English documentation tailored to your system — a reliable reference whenever your team needs it.

- **Leadership Briefings**

Focused sessions for senior stakeholders covering outcomes, governance, risk, and measuring success.

- **Ongoing Support**

As confidence grows and workflows evolve, we're available for follow-up sessions, Q&A, and improvements.

10

Our Delivery Process

From first conversation to live system

- **01 — Discovery Call**

We learn about your business, challenges, and where we can help most.

- **02 — Scoping & Proposal**

We map the solution, confirm feasibility, and agree on clear outcomes.

- **03 — Build & Test**

We build your system, test it thoroughly, and refine it with your input.

- **04 — Deploy & Integrate**

We go live — connecting it to your tools on your chosen infrastructure.

- **05 — Train Your Team**

Onboarding sessions and documentation so your team is ready to use it.

- **06 — Monitor & Improve**

We track performance, maintain governance, and keep improving over time.



ENTRA AI

NEXT STEP

Ready to put AI to work in your business?

Let's start with a conversation. We'll listen to where you are, what you're trying to achieve, and show you what's possible.



ENTRA AI

GET IN TOUCH

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