



Kortical Introduction

Accelerating and De-risking AI projects

KORTICAL.AI

KORTICAL BACKGROUND

Kortical is an AI as a Service platform with expertise support, that speeds up and de-risks your AI projects, from years to weeks

Kortical is trading since Oct 2016

It all started from Andy & Alex working on AI projects, delivering data science services and there was a lot of repetition and iteration to get good results so they sought to automate the heavy lifting, to greatly accelerate the delivery of data science solutions to deliver value from AI quickly

Andy - tech and banking background

Alex - PHD in AI

Together with a UK based team, we have delivered an AI platform that is powering the NHS blood and Deloitte tax systems to name a few

Kortical an AI accelerator built by data scientists for data scientists



Deloitte.





“A machine learning accelerator the likes you have never seen”

Simon James - Group VP of Data-science

PUBLICIS.SAPIENT



Time to Value

Deliver AI 24x faster than Gartner industry averages

*

NHS & Deloitte Business Transformation in 6 months

*

POC for the FCA 1 day

Best in Class Results

Won bid for NHS kidney matching against Deepmind, improving state of the art 8.6%

*

Beat Google and 5 other top teams at Schrodgers Datathon

*

Top scores on Kaggle competitions vs competitors such as Datarobot

Mission Critical

National blood supply for the UK runs on Kortical AI

*

Deloitte use Kortical AI to power their core tax business

*

BT uses Kortical AI for predictive maintenance of critical infrastructure

100% Customer Success

Industry averages 15% success for AI projects according to Gartner.

*

Kortical has pioneered best practice in delivering AI successfully and is committed to customer success

*

Kortical uses best in class partners

The Platform

METHODOLOGY

Prepare Data

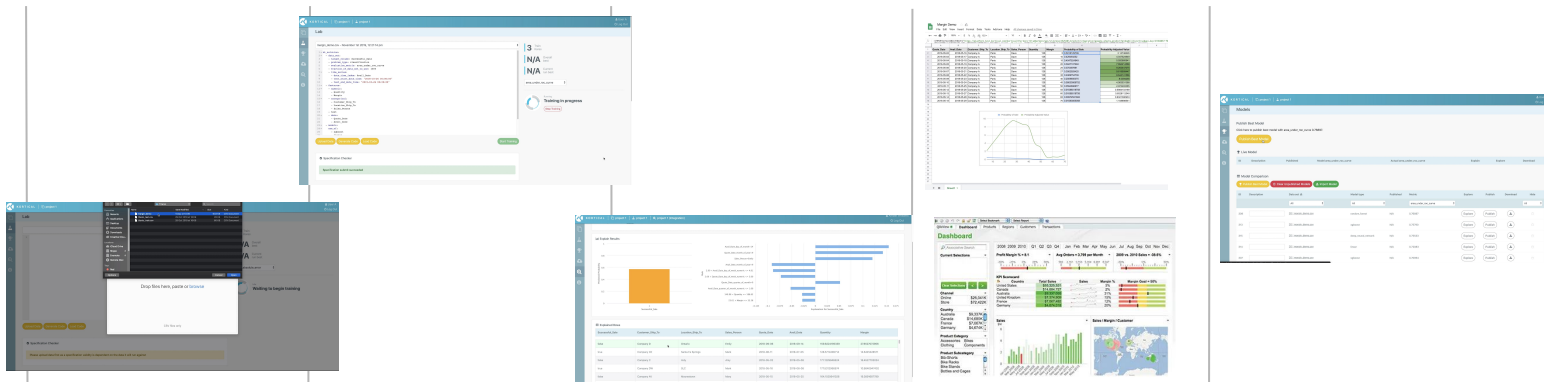
Upload Data

Train Model

Review / Explain

Insight / Value

Deploy



Data needs to be pulled from data-sources and prepared for machine learning.

Once prepared upload to the platform. This can happen via UI or API.

Kortal automatically finds the best ML solution given your data. Training thousands of models to find the best one.

Review how the model is making decisions and what factors are the strongest indicators. Use the insight to improve business and iterate on models.

Easily integrate into data tools to extract value from the ML models and deliver business objectives.

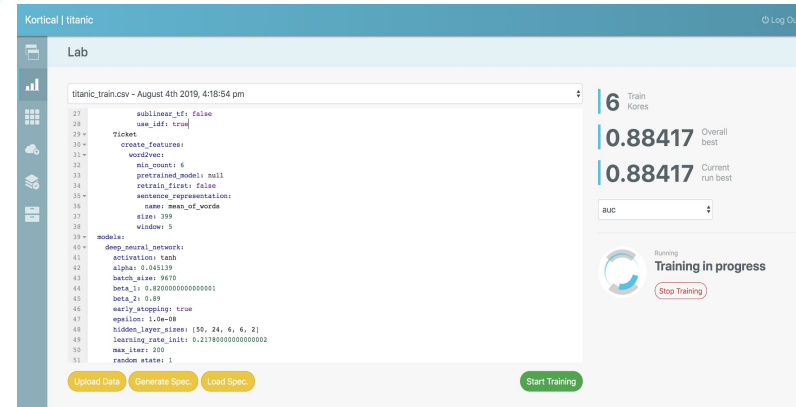
Deploy ML models into apps/ERPs/CRMS, wherever the prediction is required, to meet any scale of demand or mission critical functionality to meet the strictest SLAs.

BESPOKE AI

Kortical's AutoML can **build any ML solution**, it doesn't use templates like other AutoML providers.

Kortical uses a patented approach using **AutoML to write code** building up completely custom solutions. This has three main advantages:

1. The AutoML is building from the ground up to find the best solution so the results are world-class
2. Users can read, understand and fully **control** the AutoML through the code
3. It's easy to iterate, collaborate and version control snippets of code over clunky UI based interfaces



The screenshot shows the Kortical interface for a project named 'titanic'. The main area is a code editor with the following Python code:

```
titanic_train.csv - August 4th 2019, 4:18:54 pm
27 sublinear_tf: false
28 use_idf: true
29
30 Ticket
31 create_features:
32   wordcount:
33     min_count: 6
34     pretrained_model: null
35     retained_features: false
36     sentence_representation:
37       name: mean_of_words
38       size: 500
39       window: 5
39
40 model:
41   deep_neural_network:
42     activation: tanh
43     alpha: 0.045139
44     batch_size: 8076
45     beta_1: 0.8200000000000001
46     beta_2: 0.89
47     early_stopping: true
48     epsilon: 1.0e-08
49     hidden_layer_sizes: (50, 24, 8, 4, 2)
50     learning_rate_init: 0.21780000000000002
51     max_iter: 200
52     random_state: 1
```

On the right side, there is a summary panel with the following information:

- 6 Train Xores
- Overall best: 0.88417
- Current run best: 0.88417
- AUC: [dropdown menu]
- Training in progress (with a circular progress indicator)
- Buttons: Stop Training, Start Training

At the bottom of the code editor, there are buttons for 'Upload Data', 'Generate Spec', 'Load Spec', and 'Start Training'.

Kortical: Language define any solution

ENTERPRISE DEPLOYMENT STANDARDS

Enterprise grade deployment. Which includes:

Uptime, scalability, failover, redundancy, disaster recovery, deployment history, rollback, data lineage.

Kortical also has a patented approach to environment management making it very easy to support the ML model lifecycle.

Update models with full confidence, through multiple environments, challenger models and hot swapping.

The screenshot displays the Kortical I Titanic web interface. At the top, it says "Kortical I Titanic" and "Log Out Demo Time". The main section is titled "Deployment: Production". Below this, there are two tables: "ML Live Model" and "ML Previous Models".

ID	Description	User	Published	Model auc	Actual auc
27109		demo.user@kortical.com	August 5th 2019, 12:51:26 am	0.88455	N/A

ID	Description	User	Published	Model auc	Actual auc	Publish

Below the tables, there are two model cards:

- Predict Kores (Model ID: 27109, Model Score: 0.88455, Actual Score: N/A)**
Api Uri: https://platform.kortical.com/kortical/demo-langzapv1/titanic/predict/production
Api Key: 1455762b-18ba-44d7-a839-aba78c6467d3
Buttons: View Implementation code, Upload data for prediction
- Ghost Predict Kores (Model ID: 27127, Model Score: 0.88456, Actual Score: N/A)**
Api Uri: https://platform.kortical.com/kortical/demo-langzapv1/titanic/predict/production-ghost
Api Key: 1455762b-18ba-44d7-a839-aba78c6467d3
Buttons: View Implementation code, Upload data for prediction

At the bottom, there are two status tables:

Name	Status
tita-production-predict-0.tita-production-predict	Running

Name	Status
tita-production-ghost-predict-0.tita-production-ghost-predict	Running

A "Rollback" button is visible below the second status table.

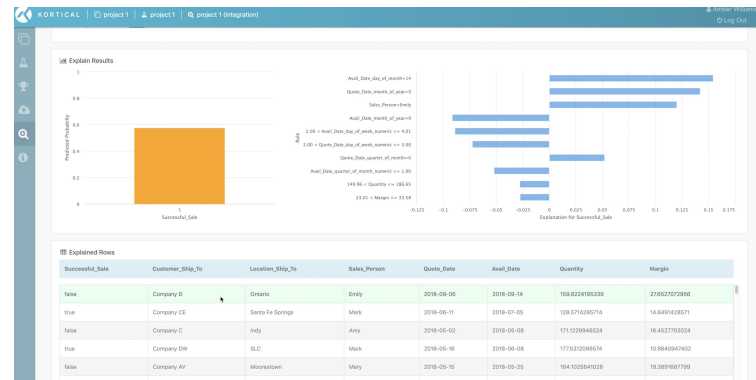
Kortical: 1 click deployment environment management

EXPLAIN ANY MODEL

Kortical can **explain any ML model solution**, from deep neural networks with text to a linear model.

Other platforms do explanations on substitute models, like showing random forest explanations for deep neural networks, etc. Kortical explains the exact model used.

By providing detailed insights on every model and prediction Kortical is **opening the black box** and providing clients with a **fully auditable AI solution**



Kortical: Visualising model explanations intuitively

KORTICAL BENEFITS

Futureproof - platform will always have the best AI algorithms and latest thinking

Deployment - mission critical standards

Full Explainability - provides actionable insights that drive business value

Best in class AutoML - better (bespoke) models = more accurate insight



Quality Results - ensures the maximum ROI from AI

End to End - automatically retrains new AI models so the best model possible is live

Support - via fully trained partners and in-house world class data scientists, leading the field in business applications of AI

VALUE OF KORTICAL



Huge business impact
from winning with AI
in your market



While reducing risk
and reducing the
costs to live AI

Unlock the power of AI for your business