

Algospark:

Generating value from applied AI with Microsoft Azure

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Summary

Artificial Intelligence (AI):

- “The capability of a machine to imitate intelligent human behaviour”
- Used to classify, predict or recommend with potential application across most business processes

Delivering value from applied AI using Microsoft Azure:

1. Define opportunity - work with key stakeholders to review high level business processes and agree potential opportunities to implement AI
2. Develop an Applied AI Roadmap to based on value and priority of opportunities
3. Design and deliver early success:
 - Initial Proof of Concept 4 weeks
 - First prototype solution delivery within 12 weeks
 - Typical project fully implemented and generating benefits within 6 months.
4. Microsoft Azure components: Azure Machine Learning, Power BI and Power Apps

Algospark

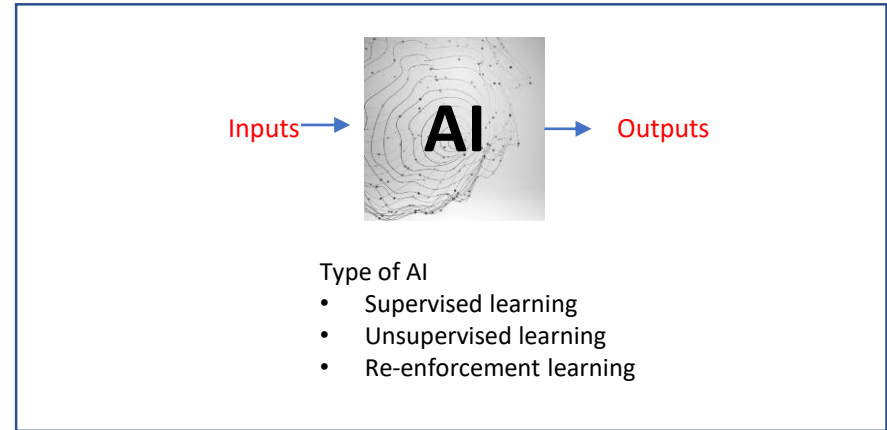
- Applied analytics and AI consultancy (<https://algospark.com>)
- Bespoke AI consulting across numerous industry sectors with a growing suite of existing products / frameworks
- Member of the Microsoft AI Inner Partner Circle





What is AI?

- **Artificial intelligence (AI)** “The capability of a machine to imitate intelligent human behaviour” *Merriam Webster*
- **How:**
 - Use mathematical models to classify, predict or recommend
 - Potential for application across most business processes
- **AI Spend 33% CAGR:** \$21bn spend in 2018, projected \$202bn in 2026 (Fortune)
- **AI is now at the convergence of big data availability, technology capability and business acceptance.**



AI Use Case Grid

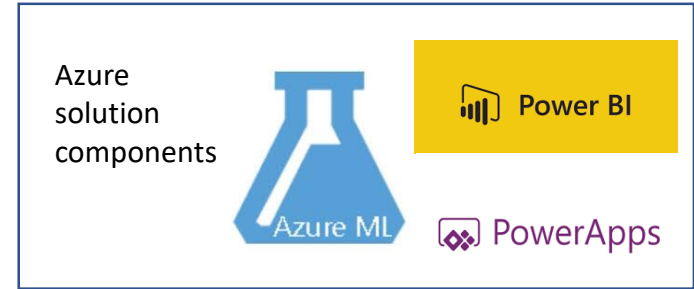
	Sales & Marketing	Customers	Staff	Suppliers	Ops & Logistics
Classify	Fraud / bad debt	Targeting / churn	Recruitment	Selection	Process outliers
Predict	Sales forecasting	Spend / basket	Performance	Costs	Outages
Recommend	Price list / discounting	Product selection	Training	Reviews	Approval systems





Delivering value from applied AI using Azure

Typical Algospark applied AI delivery plan using 1-2 Algospark specialists and no pre-existing AI framework.



Phase	Deliverables	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Beyond
1	Opportunity review with “what / why / how / value” appraisal.	[Red bar]						
	Prioritised AI development plan (programme plan) with stakeholder maps and RACI							
	Initial project plan and business case for highest priority opportunity							
	Initial analytics, early proof of concept and prototype development plan.							
2	Prototype with minimum viable product feature set		[Red bar]					
	Refined / updated business plan and project plan.							
3	Pilot and additional feature development using agile iterative development cycles (4 weeks per cycle)				[Red bar]			
	“Version 1” production ready solution							
	Solution roll out plan							
	Solution support (if required)							[Yellow bar]





Algospark: applied analytics and AI solutions

Applied AI Consultancy. Flexible bespoke solutions development

- Proof of concept, business case and project plan (4 weeks).
- Agile iterative weekly development to first prototype release (additional 8 weeks).
- Additional solution development (delivered in 4 week cycles).
- Hosted and managed solutions provided if required.

Products and Frameworks. Fast track delivery using existing Algospark solutions

1. *Location Spark* - location analytics for evaluating site performance and investment in new retail sites (<https://algospark.com/locationspark/>)
2. *Clear Vision* – computer vision image review and compliance product, used for advertising and corporate imagery governance. (https://algospark.shinyapps.io/image_review_demo)
3. *Xuuu* - customer insights framework that maps behaviour and verbatim feedback to provide prioritised product and service roadmaps. (<https://algospark.com/xuuu/>)
4. *Retail Cube* – one stop solution for hospitality sites needing co-ordinated sales forecasting, order recommendation and staffing calculator (target launch 3Q20)
5. *Earningspark* – earnings call / financial news machine reading and actions recommender for financial services companies (target launch 4Q20)

Focus areas



Frameworks



Recent clients





Algospark recent projects

Sector	What	Why	AI / Approach	Solution
Retail	Automated image compliance tool for reviewing marketing campaigns.	<ul style="list-style-type: none">• Decision consistency• 75% legal time saving• 50% project design cost savings	Computer vision, natural language processing, classification.	Algospark managed and hosted solution. Phase 1 delivered in 3 months.
Hospitality	Sales prediction and stock order recommendation system.	<ul style="list-style-type: none">• 1-3% sales uplift• 10%+ waste reduction• 50% ordering time reduction	Site classification, sales prediction, product mix optimisation and sales to order mapping.	Client owned bespoke AI solution with roll-out, integrated to stock ordering system. 6 months project.
Airlines	Dynamic pricing to maximise revenue yield per flight.	<ul style="list-style-type: none">• Av. selling price 1%+ increase• 100%+ increase in number of flights per analyst	Demand and yield curve prediction. Prioritisation of outliers based on value of recommended intervention.	Client owned bespoke AI solution with roll-out. 12 months project.
Software	Value driven “Applied AI Roadmap”.	<ul style="list-style-type: none">• Augment product offering and increase subscription price• Reduce costs of operation	Numerous prediction / detection / classification use cases.	Roadmap, business case, prototypes and pilots.
Government	Automated production of plans for children with learning challenges.	<ul style="list-style-type: none">• Reduce preparation time by 25% saving £1500 per plan (<i>35,000 new plans prepared in England each year</i>)	Multi-stage classification algorithms and natural language processing of expert reports.	AI prototype built for a consultancy and 3 boroughs. 6 months prototype project.
Telecoms	Mobile roaming fraudulent calls detection.	<ul style="list-style-type: none">• Reduce fraud calls (<1% calls)• Minimise “false positive” deactivations that lead to genuine customer losses.	Deep learning denoising autoencoder. Mapped to fraud cost / loss of customer value.	AI prototype built for consultancy and mobile operator. 2 months project.





More information

- Algospark: <https://algospark.com>
- Solution demos: <https://algospark.com/#solutions>
- Blog: <https://algospark.com/blog/>

- Azure Machine Learning: <https://ml.azure.com>
- Power BI: <https://powerbi.microsoft.com>
- Power Apps: <https://powerapps.microsoft.com>

