AI KICKSTARTER

# Explore your AI Business

RANDOM FOREST

# Our comprehensive AI Kickstarter package helps you identify and prioritize business opportunities where advanced analytics can drive significant value.

This guide outlines the essential components of the AI Kickstart process and serves as a useful resource for gaining a deeper understanding of our methodology.

# Contents

# The AI Kickstarter Process – Overview

The AI Kickstart process is not intended for full deployment but provides a valuable introduction to working with AI and advanced analytics – giving you a sense of how these processes can be applied in your organization.

## 1.
### Identify a Business Case

The first step involves uncovering various business cases where advanced analytics can be applied to extract value from data. We want to find the "golden nuggets" and pick one to move forward with.

## 2.
### Identify Data

Following the identification of the business case, we proceed to identify and gather the relevant data.

## 3.
### Set Up the Environment

Now, we establish the necessary environment.

## 4.
### Analyze

In this phase, we conduct the analysis based on the prepared data.

## 5.
### Hand-Over

Finally, we hand over the insights to you and your team.

Now, let's look at each of these stages in a little more detail..

# Step 1
## Identify a Business Case

**Estimating Business Effect**

The first step is to clearly define the business case, which involves identifying how advanced analytics can be applied to achieve a tangible business impact and estimating the potential value. For instance, if we could target customers most likely to purchase Product A, we could potentially improve the profitability of our outbound campaign by 10%. This constitutes a business case, providing a quantifiable estimate of the expected benefit.

**Estimating Implementation Costs**

Next, we need to estimate the cost of implementing the solution. This could range from minimal to significant, depending on the complexity. For example, if the solution involves a simple policy change, the cost could be negligible. However, if the solution requires difficult-to-access data or involves real-time applications that leverage advanced analytics, the implementation could be much more complex and costly.

**Prioritizing Business Needs**

It is also crucial to gather input from the business side to determine what is most important to them. This prioritization helps ensure that the focus remains on the initiatives that offer the greatest value to the business.

**Verification by Business Stakeholders**

Once a business case is developed, it needs to be verified by the business process or function owner associated with that case. It's essential that these cases are not merely theoretical constructs developed by the IT team. For example, if the case involves an outbound campaign, verification should come from the outbound sales executive or a relevant business leader to ensure the figures and assumptions are accurate. Business-side verification is critical – IT validation alone is insufficient.

# Step 2
## Identify Data

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Once we have selected a business case to pursue, we move forward by analyzing all the relevant data.

**Identify Hypothesis and Estimate Effect**

The first step is to formulate hypotheses based on the selected business case. For example, in a churn scoring scenario, the hypothesis might be: "If we can identify patterns in customer behavior that indicate a higher likelihood of churn, we could take proactive steps to retain those customers." This could involve adjusting pricing, improving customer service interactions, or directly reaching out to at-risk customers.

**Customer Behaviors**

Given the business case, the next step is to identify specific customer behaviors that could be relevant to predicting churn. For example, a hypothesis could be that customers who express dissatisfaction during their last call to customer service are more likely to churn. We would then consider what potential impact this data could have on churn prediction.

**Data Evaluation**

We need to assess the predicted effect of the identified behaviors and estimate the cost and ease of using this data in our analysis. A comprehensive list of relevant behaviors should be created, ranking them by their importance and the feasibility of obtaining the data. For instance, certain data might be crucial yet costly to acquire, while other data might be less critical but readily available from a data warehouse.

**Data Prioritization**

After compiling the list of potential data points, we need to prioritize which data to use in the first iteration. Some data may be critical despite being costly, while other data, though less significant, might be easy to access and worth including in the initial analysis. It's also essential to keep track of data points that were not used in the first iteration but could be valuable in subsequent phases.

**By following the steps above, we can systematically identify, evaluate, and utilize the most relevant data to address the business case effectively.**

# Step 3
## Set Up the Environment

The environment setup can involve various tools such as Microsoft Fabric, Azure Machine Learning, Databricks and Alteryx. It's important to consider the future usability of the environment, especially if you plan to use the solution for multiple iterations (e.g., iterations 2, 3, and 4). This foresight ensures that the environment is scalable and adaptable to evolving needs.

At a minimum, the analysis environment should meet the following requirements:

**Access to Historical Data**
The environment must provide access to historical data in various formats, particularly the statistics relevant to the process you want to analyze.

**Analytics Tooling**
There should be robust tools available for conducting the analysis.

**Publication Capabilities**
The environment should allow for the publication of data and results. This could be in the form of a report or through deployment for operational use.

**Continuous Verification**
It's crucial to have mechanisms in place to continuously verify that the model is delivering the desired business impact.

Azure Machine Learning

Azure AI Studio

databricks

Microsoft Fabric
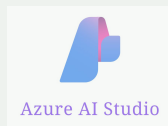
# Step 4
## Analyze

We won't delve too deeply into the specifics here, as the type of analysis will vary depending on the business case. But here are two key takeaways from the analysis phase:

**Importance of Verification**

It's crucial to verify the outcome of our analysis – simply showcasing a well-designed ROC curve or highlighting metrics like false positives is not enough. The key is to ensure that the model's performance aligns with the business case and that it can deliver the desired business impact. This verification should be done as early as possible, ideally during the analysis phase, to gauge how the model would perform if implemented.

**Handling Data Quality Issues**

Given that this is an AI Kickstart, there's a high likelihood that the data quality will be suboptimal. Addressing data quality issues is crucial, but it's also important to acknowledge that poor data quality can hinder the analysis. We cannot proceed effectively if the data is insufficient, even if initially it was assumed to be adequate.

When selecting a business case, it's essential to consider the risk associated with data quality. It's often better to start with a simpler business case that has a higher probability of success, rather than attempting a more complex one where data quality could be a significant barrier.
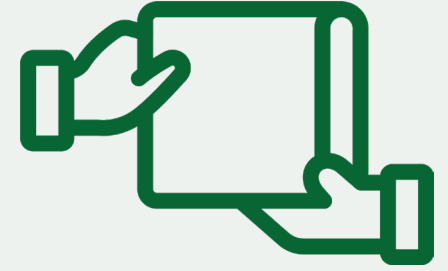
# Hand-Over

AI KICKSTARTER – HOW DOES IT WORK

# Step 5
# Hand-Over

Once the analysis is complete, it's essential that we effectively communicate the results to you. The following elements should be included in a proper hand-over:

**Comprehensive Business Case List**
We present an updated list of business cases, including any new information or insights that may have emerged during the project.

**Analysis Methodology** We explain the methods used in the analysis to provide a complete understanding of the approach taken throughout the project.

**Key Insights**
We highlight the significant insights discovered during the analysis.

**Data Quality Issues**
We address any data quality issues encountered, detailing how they were handled or what impact they may have had.

**New Business Cases**
If new business cases have been identified based on the patterns observed or through deeper data engagement, we add them to the business case list.

**Long-Term Architectural Recommendations**
While the environment for the initial business case has been set up, it's important that we provide you with recommendations for a long-term architecture as well. We will outline a direction for the future, including any components or systems that may be needed in subsequent iterations.

**Next Steps**
We describe the next steps for you and your organization. This could involve the full deployment of the methodology, prioritizing the next business case for trial, or deploying the insights gained from the current analysis. If applicable, we outline the steps for deploying a comprehensive architecture in the next phase.
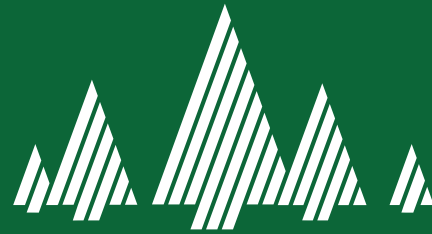
# Final Word

Our AI Kickstarter package is a transformative journey designed to help you unlock the potential of advanced analytics and AI. This offering is tailored to identify high-impact opportunities within your business, guiding you through the initial phases of AI adoption. From finding suitable business cases to deriving actionable insights, our method is both strategic and practical, ensuring that AI is not just a buzzword but a powerful tool for driving real value.

While each project will differ, this guide will hopefully provide a solid starting point for your upcoming AI Kickstarter initiative.

**Thank you!**

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