Carnegie Mellon University Africa
Certificate I: Understanding AI and Machine Learning in Africa

Course AIML02: AI and Machine Learning in Africa

Module 3: AI Business Strategy
Lecture 2: How to Choose Your First AI Project

Welcome back to Module 3 of AI and Machine Learning in Africa, a course which provides an overview of the relevance of AI and machine learning to Africa and their potential to solve economic and social problems.

In this second lecture, we will summarize the key points of an article, "How to Choose Your First AI Project", by Andrew Ng, a globally-respected expert, proponent, and practitioner of AI. We begin by revisiting the impact of AI on businesses. We then explore the five traits of a strong AI pilot project, before introducing a five-step framework for setting up your AI project for success. We will finish up by summarizing what we have covered and providing the details of the article that you should read to consolidate what you have learned.

After watching and listening to this lecture, you should read the original article, take notes, and then go through this lecture again to consolidate the messages in the article.

We have four learning objectives, so that, after studying the material covered in this lecture, you should be able to do the following.

1. Summarize the five traits of a strong AI pilot project.

2. Identify the five key steps for setting up a successful AI pilot.

3. Explain why it is better to choose a few small pilots rather than one big one.

4. Explain why it is better to focus on automating tasks, rather than jobs.

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"How to Choose Your First AI Project".

Slide 2   "Artificial intelligence (AI) is poised to transform every industry, just as electricity did 100 years ago."

According to McKinsey, it will create $13 trillion of GDP growth by 2030, most of which will be in non-internet sectors including manufacturing, agriculture, energy, logistics, and education.

Slide 3   ""Implementing a company-wide AI strategy is challenging ..." so Andrew Ng's "advice for executives, in any industry, is to start small."

Choose a small number of pilot AI projects: one to three. Two or three give you a greater chance of one succeeding.

These projects will help your company gain a concrete understanding of what it takes to build an AI product or service, and build momentum.

Slide 4   The purpose of your pilot projects is only partly to create value.

The success of these first projects will help convince stakeholders to invest in building up your company's AI capabilities.

Slide 5   When you're considering a pilot AI project, ask yourself the following questions:

Slide 6   Does the project give you a quick win?

Choose a pilot project that can be done quickly, ideally within 6-12 months, and have a high chance of success.

It doesn't have to be the project that gives the greatest value.

Slide 7   Is the project either too trivial or too unwieldy in size?

Choose a project that is not too trivial and not too large.

It should be meaningful enough, in business terms, so that success will convince other company leaders to invest in other AI projects.

Slide 8   Is your project specific to your industry?

Choose a company-specific project so that your internal stakeholders can easily understand its value.

Slide 9   Are you accelerating your pilot project with credible partners?

If you are still building up your AI team, consider working with external partners to bring in AI expertise quickly.

Eventually, you will want to have your own in-house AI team.

However, waiting to build a team before launching the project might introduce delays that will not keep pace with others.

Slide 10   Is your project creating value?

Most AI projects create value in one of three ways:

reducing costs (automation creates opportunities for cost reduction in almost every industry),

increasing revenue (recommendation and prediction systems increase sales and efficiency),

or launching new lines of business (AI can enable new projects that were not possible before).

Slide 11   "AI is good at automating tasks, rather than jobs."

A good source of ideas for AI projects can be found in automating tasks that humans are doing today.

Try to identify the specific tasks that people are doing, and see if any can be automated.

Supervised learning can often be used for this.

Slide 12   Once you have decided on a project, set the parameters.

Clearly state the desired timeline, the desired outcome, and allocate a reasonable budget.

Slide 13   Appoint a leader.

Choose someone who can act as a bridge between AI experts and your industry's domain experts.

This will make sure that when the project succeeds, it will influence the rest of the organization.

Slide 14   Conduct business value and technical diligence.

Make sure that the business leaders agree that this project will create sufficient value for the business.

Make sure that the project is technically feasible.

Slide 15   Build a small team.

A team of five to 15 people is best.

Projects that can be done with a small team ensures that everyone will know everyone else and understand each other's work.

While some projects may require more than 100 (or more than 1000) engineers to succeed, a pilot project should not need that many.

Slide 16   Communicate.

When the pilot project achieves its milestones, and especially when it delivers a successful result, give the team an internal platform to allow their work to become recognized inside the company, from the CEO down.

Make sure the business team received plenty of credit and reward for success.

This will encourage other business teams to jump into AI as well.

To summarize:

1. Implementing a company-wide AI strategy is challenging so start small by selecting a small number (two or three) pilot projects.

2. These pilots should have the potential of providing a quick win, they should be the right size, company-specific, involve the right partners, and add value to the business.

3. AI is good at automating tasks, rather than jobs, so focus on tasks.

4. Successful pilots have clear parameters, clear business value, are technically feasible, have a cross-sector leader, involve a small team, and access to communication channels that allows successes to become known throughout the company.

Here is the article on which this lecture is based.   Please take the time to read it and then review this lecture again.

Ng, A. (2019). How to Choose Your First AI Project, in Insights You Need from Harvard Business Review – Artificial Intelligence, Harvard Business School Publishing Corporation. https://hbr.org/2019/02/how-to-choose-your-first-ai-project