NyRad's Offset Chatbots

Concept Paper

INTRODUCTION

With its ability to mimic human intelligence and process vast amounts of data, Artificial Intelligence (AI) has opened the door to a wide array of specialized niches. Each niche addresses unique challenges and opportunities, propelling AI into various facets of our lives. As Canada's leading consultancy in the niche domain of Industrial and Technological Benefits (ITBs) and international defence offsets, NyRad Inc. is combining its domain-specific experience and expertise with the endless possibilities of AI to develop two highly advanced but incredibly niche AI-driven chatbots.

Having worked as consultants in the defence offset domain for ten years, NyRad is intimately aware of the challenges associated with navigating defence offset policies, particularly Canada's Industrial and Technological Benefits Policy. Not only is the work incredibly complex, time-consuming, and expensive for companies to manage, but it also requires a unique skill set that makes finding quality support nearly impossible. For these reasons, amongst others (some of which are outlined below), the area of defence offsets is ripe for technology-based intervention, like the chatbots presented herein.

PROJECT OVERVIEW

Product 1: ITB Chatbot

Canada's defence offset policy, the Industrial and Technological Benefits Policy, is particularly difficult to navigate. Compared to other offset policies around the world, Canada's is seen as incredibly stringent. The policy is rule-based, with costly remedies tied to non-compliance. Adding an additional layer of complexity for those working with the ITB Policy is both the lack of publicly available ITB information and the shortage of available expertise in the market.

By introducing an ITB chatbot trained on publicly available ITB data, as well as NyRad's knowledge base on the topic, NyRad aims to improve productivity for ITB managers and offset professionals working in Canada while demystifying the policy for others, like Post-Secondary Institutions and Canadian Small and Medium-sized Businesses (SMBs) who may be looking to better understand and leverage the policy in some way.

The development of the ITB Chatbot will be uniquely focused on the needs of those navigating Canada's ITB Policy to improve their policy awareness and knowledge. The desired outcome is improved user proficiency and streamlined policy engagement.

The intended benefits of the ITB Chatbot include:

- Increased 'first time-right execution' amongst all users.
- Reduction in the number of ITB-related issues that require escalation/senior input.
- Reduction in need for external ITB support/consulting.

- Reduction in time to ITB proficiency amongst new ITB managers.
- Increased knowledge and insight.
- Improved policy engagement amongst all users.

Product 2: International Offset Chatbot

Leveraging defence spending through offsets is a global practice. And while it's not universal, over 130 countries around the world utilize some form of industrial participation policy when procuring defence-related goods and services. While many of these policies have similarities in how they're structured and how economic activity is measured, for example, they are all unique. As an offset professional responsible for managing a company's obligations globally, it can be difficult to keep the attributes of one policy straight from another. For instance, some countries permit banking, while others do not. Some require annual reporting, while others expect activity to be reported quarterly. Some policies are incredibly punitive, with remedies tied to annual shortages, while others calculate penalties at the end of the contract. For offset professionals, there is an extraordinary amount of time spent visiting and re-visiting policy documentation.

NyRad intends to develop an International Offset Chatbot that streamlines how an offset professional engages with unique offset requirements – providing country-specific policy information in real-time and leveraging natural language processing for additional ease in the information gathering process.

Unlike the ITB Chatbot, the development of the International Offset Chatbot will be uniquely focused on curating publicly available information on offset policies worldwide. Starting with 5 of the most common, uniquely challenging policies, the International Offset Chatbot will be an ever-green tool. New countries and their policy information will be added continuously or as user need is identified.

The number one benefit of the International Offset Chatbot is:

- Reduction in time spent researching and navigating policy information (i.e., decreasing time spent on lower-value activities, thus increasing the time available for higher-value, strategic work).

FUNCTIONALITY AND USER INTERFACE

The NyRad chatbots are software applications that use natural language processing (NLP), machine learning, data analytics, and cloud computing to interact with users on the niche topic of defence offsets. They are conversational agents that use NLP to understand and respond to human language inputs and questions on all topics related to offsets. Using embedded machine learning algorithms, they are able to analyze inputs and generate responses in a way that mimics human conversation.

The Canadian ITB Chatbot will be engineered to provide instant, accurate, and comprehensive information about the Canadian ITB policy. By integrating publicly available ITB policy data with NyRad's extensive knowledge base, the ITB Chatbot will ensure users have access to the latest and most relevant policy information combined with execution support.

The International Offset Chatbot aims to curate information and simplify the understanding of offset policies across different countries, initially focused on ten key markets. The chatbot will continuously expand its knowledge base, adding new countries and policies regularly. This approach ensures users can access the most current and relevant international offset information in real time.

The Chatbots will be deployed as a web application to allow for effortless interaction and accessibility. The chatbots will be a go-to, ever-present resource optimized for desktop and mobile use.

CONCLUSION

NyRad's ITB Chatbot and International Offset Chatbot represent a significant leap forward in offset compliance and international trade facilitation. These chatbots are not just technological advancements but strategic assets designed to empower businesses and professionals with accurate, accessible, usable, and up-to-date information.

NyRad is looking to revolutionize how global offset policies and ITB programs are navigated. NyRad is not only offering a solution to existing challenges but also paving the way for a more informed and efficient future in international trade and compliance. With NyRad's commitment to excellence, the ITB Chatbot and International Offset Chatbot are poised to become indispensable tools in the global offset market.