



accessible
intelligence

Technology Update

November 2022



Overview

In 2021 we spent much of the year re-building models and algorithms using insights from the first generation of our technology. Three clients are already live, and several more are getting ready to launch.

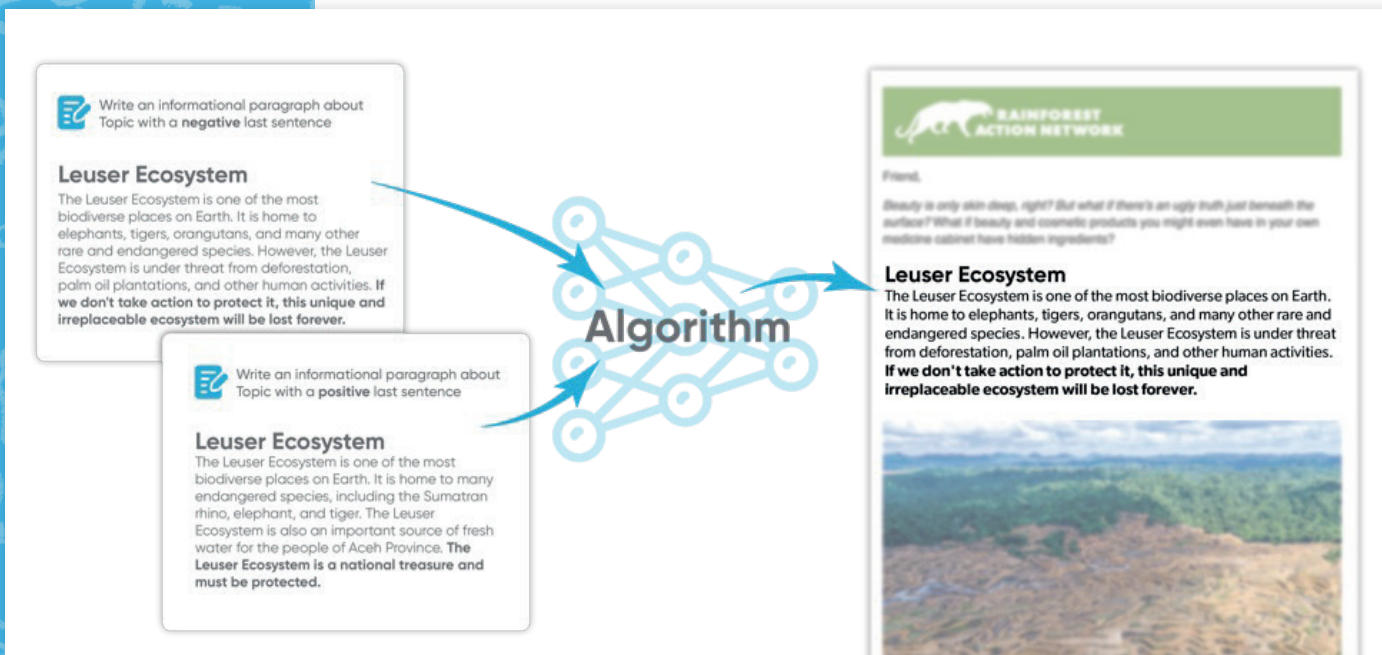
The technology revolution continues.

In 2022 we have already delivered updates to the reporting and content creation dashboards. The remaining innovation priorities for the current year are described in this latest Technology Update.

Automated Email Content Creation

Have you heard of GPT-3? It is a remarkable NLP (natural language processing) technology developed by OpenAI. The algorithms in GPT-3 write text based on limited user inputs. For example, you could ask GPT-3 to write a 500-word article on the potential impact of climate change on countries in the sub-Saharan. The results would leave you speechless.

We have started experimenting with GPT-3 using client marketing emails as the reference library (in addition to classification values that describe the content.) The objective is to see if GPT-3 can write the email copy that our algorithms have specified.



The expectation is to have a beta version of the technology integrated into the Accessible Intelligence platform by February 2023. The impact will be enormous. Clients can focus on editing content, as opposed to writing content, which will save them considerable resource. It will also mean that clients can update content more frequently allowing them to re-target supporters more often.



'Emergency Appeal' Clusters

Our current use cases focus on longer-term marketing objectives, and ongoing supporter engagement (for example: encouraging non-donor activists to make a donation, or encouraging one-time donors to become monthly donors.)

However, non-profit marketers know that high-profile emergency appeals generate a better response from supporters than regular donation 'asks'. People are more motivated to give when their awareness of an issue is higher and an immediate response is needed to alleviate suffering. So, we spent some time this year thinking about ways that algorithms could make emergency appeals more effective.

Later this year we are going to release a new function in the Accessible Intelligence dashboard that will cluster all supporter records based on their predicted response to an emergency appeal. This will allow clients to send our message variations specified by the algorithms for supporters in each cluster. For example, the same emergency appeal might focus on the negativity of the situation in some clusters, while supporters in other clusters might respond better to a more hopeful message.

[@Ed we need to come up with a dashboard comp to use in this section]

Aggregate Models

Until now our work has focussed on customizing a core model for an individual client. This has allowed us to use 'issue taxonomy' to help with clustering and with the recommendations for email content. For example, algorithms might specify 'protecting dolphins' for the supporters in a specific cluster, and then specify 'protecting whales' as the issue for supporters in another cluster. The recommendations come from a custom adaptation of the core models so we can be this specific when it comes to looking at issues for a single client (in addition to other content values like intended emotion.)

This has worked well for larger clients with a sizable number of data records. Our question has been: Is it possible to develop aggregate models that don't reference issue taxonomy while maintaining effective predictive accuracy? The answer is 'yes'.

These models will reference categories like 'intended emotion' that are generic to any non-profit. We may still create variations of the aggregate models to accommodate differences between non-profits in a specific vertical, or non-profits of varying size. The testing on this is ongoing. Our plan is to have the aggregate models in place in the first three months of 2023.

Benchmark Data

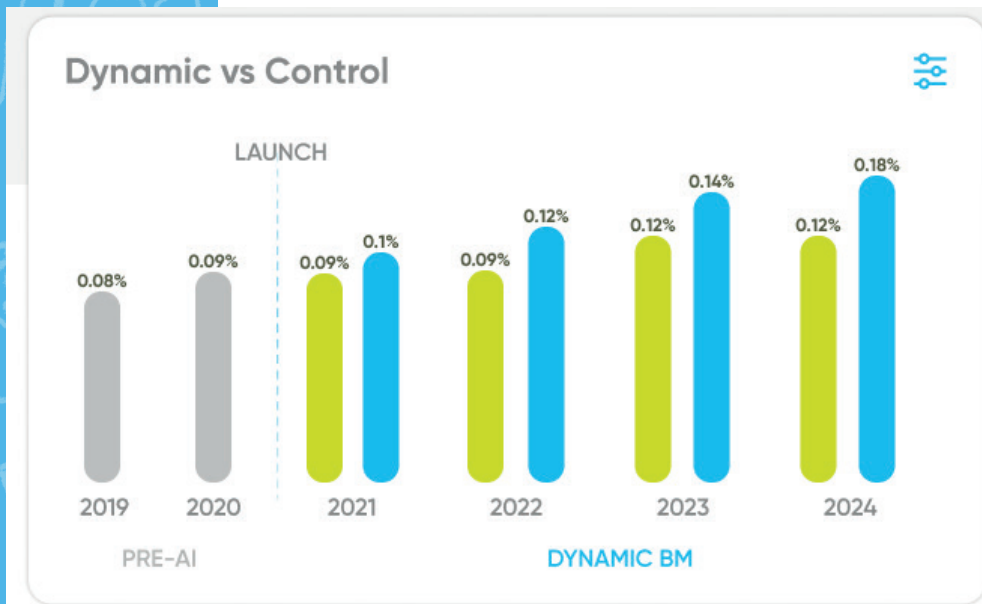
Tracking the performance of supporters in the Accessible Intelligence marketing streams is critical to objectively measuring the benefits of our technology, and to continuously improving the models.

The original models we developed triggered between five and eight emails to a supporter over a single five-to-six-week period. Our new models send marketing streams of one-to-two highly targeted emails to qualified supporters, during four different time periods, over 12 months. This has presented some challenges as to how we assess performance and report outcomes.

The most logical approach for benchmarking is to compare conversion data for supporters receiving the Accessible Intelligence marketing emails (over 12 months) with the conversion data during a two-to-three-year period prior to launching our technology. The 'pre-AI' data will only consider conversion

rates for records that our models would have qualified so that we have a fair evaluation of performance.

Once the Accessible Intelligence technology is launched, we will withhold from the marketing streams a portion of the records that we qualify, effectively creating a 'control group' for benchmarking. The records that we withhold will continue to receive all client communications so we can measure the impact of adding the Accessible Intelligence emails over time.





Automated Classification

Creating a database of values that describes client marketing content is central to the predictive accuracy of our algorithms. In other words, we need to understand what types of email content are triggering a response from supporters. For example: “in email A the intended emotion is hope”.

To make sure this data has an extremely high level of consistency (for a single client, and across clients) the work is done manually. This is time consuming and expensive. We have identified a number of content categories for which the content classification could be done automatically while maintaining the consistency we require. This will help reduce staff time and lower costs for clients.

We have achieved so much in 2022, and the pace of innovation, research, and platform enhancement is set to accelerate in 2023. Are you interested to find out more? Please send an email to graham@accessibleintelligence.io.