Abstract

User Experience is one of the pillars and objectives of every Digital Transformation Journeys of our customers. As part of our **Digital Workplace** offering we are aiming to provide our clients the best User Experience for their employees and their customers.

In that area, we are partnering with a vendor/product to enhance the end user analytics that starts to ramp up and resonates very well within our clients – **NexThink**.

NexThink is a platform that is **consolidating huge amount of information** through agents installed on the different devices and servers on our clients environments, allowing the collection of very valuable information to analyze any issue with an specific device, patch or application.

As of today, NexThink is collecting all that information and providing a dashboard view on different events occuring in the environments to activate support and maintenance teams as soon as possible.

The **value of this proposal** is coming when we are going to be using all this data not only to monitor what is happening, also to **predict crashes and low performance experiences of the user devices** so we can anticipate some actions and communicate to the users and maintanance teams accordingly before really the crashes happens.

Atos

Predictive User Experience

Users are following certain patterns that are linked to crashes and bad experiences every single day, so having the ability to advise them at some point in some sort of effective warning is our objective, making this innovation an added value no other competitor has today, a **total differentiator in the market**.

How we are going to accomplish this? NexThink provides **REST APIs** that allow us to access to their more important data entities so you can **capture the centralized data** on an **ongoing basis**.

Now, once we have the data and the ability to capture and analyze incrementally on an ongoing basis, the next piece in the architecture is the **ML model to predict these crashes,** and in order to do that we are using **Google TensorFlow** with some of the basics deep learning models like RNN / LSTM and CNN, taking the information as inputs from the NexThink entities (Devices, Executables, Execution errors, Device warnings, Execution warnings, Executions) and targetting to predict the NexThink entity "Device errors" before occuring. Therefore, we do have an entire training dataset (2, 3 months) with inputs and outputs to really train our model based on the past data from NexThink.

An initial model has been built and tested with NexThink sandbox environment. In order to operationalized in a client environment will require a **refinement on the training based on the client dataset**. Per client, the model will be refined and deployed into Google Cloud per architecture below.

Finally in our architecture, connected to NexThink, and the Google TensorFlow ML model will have to connect the different mechanisms in order to **proper notify the devices/users following the client** guidelines, but it could be itself NexThink comm channel, OneContact, OneSource, Circuit, MS Teams, SNOW … etc.

Predictive User Experience

Javier Ponce Suárez
Head of Group Digital Transformation.
Distinguished Expert and Scientific
Community member

Oscar Verge
Director Digital Transformation

Neil Stokes
Product Manager Digital Workplace
End User Analytics (NexThink)