Hewlett Packard Enterprise

Industry
Telecommunications

Objective
To increase the revenues of the IPTV pay-per-view business by increasing the performance of the recommendation system.

Approach
The Loop Q cognitive appliance makes use of movie critics' reviews from several sources to deeply tag movies based on what the reviewers found worth mentioning, rather than the content of the movie. This approach was used, instead of the slow, expensive, and non-scalable human tagging method.

IT Matters
- Autonomously learn microtags for movies, directly from globally available dark data

- Leverage the Loop Q platform with self-learning cognitive S/W robots

- Cognitively retrofit and upgrade all your legacy systems with a single platform

- End-to-end from hardware to intelligent solution

Business Matters
- 270% INCREASE in revenue of the pay-per-view business compared to the previous human tagging

- 99% DECREASE of human total processing hours

- 100% PROTECTION of legacy system investment

Supercharge recommendation engines with cognitive computing

Loop Q cognitive appliance drives a step increase in the performance of recommendation engines

A leading Asian Telecommunications operator with a combined mobile subscriber base of over 500 million customers in 25 countries, sought to increase the revenue of its IPTV pay-per-view business.

Having identified that their recommendation system was under-performing, the top-tier Telco moved from a metadata-based approach to a new Netflix-inspired extensive movie tagging method, using a team of humans to watch the movies. Whilst the new tags together with the metadata provided a 100% increase in revenue, human tagging was expensive, slow and not scalable to enrich the full catalogue consisting of tens of thousands of movies.

Loop Q was able to utilize the dark data of movie critics' reviews from several sources to deeply tag movies based on what the reviewers found worth mentioning, rather than the content of the movie.

Challenge

Transform recommendation systems into high performing, scalable solutions
The client sought to increase the revenues of its IPTV pay-per-view business by increasing the performance of their recommendation system.

In their previous approach, the client had used metadata about the movie, such as genre, MPAA rating, and cast. The client then moved to a Netflix-inspired method and saw the benefit of extensive movie tagging; however, this second method relied on human tagging which was expensive, slow and not scalable to enrich the full catalogue consisting of tens of thousands of movies.

The local Loop Certified Partner ensured that Loop Q was able to utilize the dark data of movie critics' reviews from several sources to micro-tag movies based on what the reviewers

Customer at a glance

Asian Telecommunication Operator
A leading telecommunications company that provides Internet, IPTV, mobile phone and fixed line telephone services to a combined mobile subscriber base of over 500 million customers in 25 countries.

Application
- AI & DL in Entertainment

Hardware
- Apollo 6500 Gen9
- Hosting up to 8 P100 and 256 GB of RAM, using 2690V4 processors

Loop AI Labs HPC appliance
- Powered by GPUs, scales from 8,000 cores up to 40,000 cores
- Up to eight appliances clustered using InfiniBand, addressing high-demand processing tasks

Software
- Loop Q, Loop AI Labs' unsupervised human-capacity cognitive computing platform is designed to be general purpose, enabling endless possibilities for implementing various cognitive applications across all industries
- Learning on the dark data of a collection of websites containing movie reviews.

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found worth mentioning, rather than the content of the movie.

Cognitive Solution

The cognitive application developed by a Loop Certified Partner uses the Loop Q cognitive appliance. The HPE Apollo 6500 server is the main platform for training deep learning models across the enterprise. It provides rack-scale, automated, real-time intelligence, using up to 8 GPUs per compute node, pairing perfectly with the Loop Q appliance.

The appliance makes use of movie critics' reviews from several sources to deeply tag movies based on what the reviewers found worth mentioning, rather than the content of the movie.

Dark data used for learning phase:
A collection of websites containing movie reviews.

Dark data used for reasoning phase:
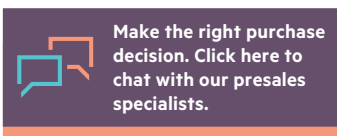All the reviews associated with a specific movie.

Benefit

Scalable deep movie tags
Whilst deeply tagging movies had proved successful, human tagging was a slow and expensive approach that could not be applied to the full catalogue. Making use of movie reviews, the solution provided through Loop Q was able to micro-tag movies in a scalable way. This increased revenue of the pay-per-view business by 270%, whilst decreasing the human total processing hours by 99%. The solution also completely protected legacy systems investment.

"Building personalized genres for each viewer using Loop Q – to me, that's the key step – instead of using a small human-generated set of genres, we use machine intelligence to create a genre that is highly specific to each user."

- Bart Peintner, CTO, Loop AI Labs

Learn more at
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