How the AWS Cloud & Machine Learning streamline editorial processes

CASE STUDY

The Ringier Axel Springer Polska (RASP) publishing company, which operates one of Poland’s most popular internet portals, wanted to make it easier for their editors to publish online articles. To realise this goal, they chose to build an intelligent image recognition tool.

BUSINESS NEED

RASP is one of the largest media companies in Europe, who publishes thousands of online articles on a daily basis. Unfortunately, however, their existing image search and upload tools were slowing down RASP’s editorial process. That’s when they came up with the idea to build a Cloud-hosted image recognition tool based on Machine Learning algorithms to help streamline their workflow.

As RASP is currently migrating from a private cloud to the Amazon Web Services (AWS) Cloud, they decided to create the prototype on AWS to get a better sense of the public Cloud’s possibilities.

When they approached the Cloud provider asking for help with the prototype’s realisation, AWS recommended that RASP reach out to their experienced Advanced APN Consulting Partner – PGS Software – as they not only specialises in Cloud solutions but also command the editors’ native language, (a key prerequisite for a press industry solution).

The new concept would aim to simplify the editors’ work efforts, by allowing them to focus on writing and redacting, as opposed to having them manually search for images to match the content they create. That’s why RASP chose to automate the metadata functionalities, which would render creating internal libraries and tagging images significantly faster, simpler, and more effective.

SOLUTION

In response to the expectations and needs of the media group, PGS Software decided to use the AWS Cloud and Amazon Rekognition. The latter allows you to recognise people in images (including the number of people), as well as thousands of other objects and scenes, such as telephones, bicycles, buildings, parking lots, and beaches. Amazon Rekognition also enables accurate face analysis and examines the attributes of people, providing detailed information about gender, age, emotions, etc.

The second part of the prototype, based on Machine Learning (ML) algorithms, was entirely designed and implemented by PGS Software. Thanks to the use of ML, the tool can also recognise logotypes and commercial signs of specific brands.

Using Amazon Rekognition and ML helped render the image tagging process much simpler by enabling the tool to automatically add the appropriate attributes and features. Now, metadata in the form of tags makes it easier for the editors to select and categorise images. The solution also allows for rapid model development with the use of Deep Learning algorithms, enabling RASP to easily innovate in the future.
The image recognition concept was realised in just 4 weeks. In this short time, PGS Software’s working prototype of the solution was able to prove to RASP just how much the tool’s implementation would help streamline their editorial process.

Whilst creating the solution, PGS Software took into account the language of the editors’ work and translated the results from Amazon Rekognition into Polish.

Thanks to this, editors who create content in said language will be able to comfortably use the module that handles all of the Polish-language tags and other types of textual content.

PGS Software supported RASP during the development’s conceptual phases and helped to significantly simplify various organisational project issues. In addition, the team of experts proposed and tested 3 different logo recognition methods to determine which one will work best in terms of minimising the probability of errors occurring.

The created image recognition prototype was able to highlight just how quickly even the most technologically advanced applications can be developed on the AWS Cloud – which in turn allowed RASP to grasp some of the previously untapped benefits of the public Cloud.

By developing the image recognition prototype for RASP, PGS Software confirmed their efficiency and experience in creating Cloud-native applications. The project was delivered on time, and its quality met our high expectations. The PGS team prepared an extension of the Machine Learning module, expanding AWS’ standard image recognition capabilities. We appreciated their Scrum work approach, reliable documentation, high commitment at every stage of the project, and great communication. The efficient implementation of the prototype has helped us confirm that we do indeed need to integrate the image recognition module with our editorial systems.

Katarzyna Ludka
Artificial Intelligence Director
Ringier Axel Springer Polska

PROJECT DETAILS

Solutions — AWS Cloud, Infrastructure as Code, AWS Serverless

Technologies — Java, Python, Angular, AWS Lambda, S3, SQS, CloudWatch, SageMaker, Rekognition, SNS, SES

Tools — JIRA, Confluence, Terraform, Docker, AWS CLI, AWS CodeCommit, IntelliJ IDEA, PyCharm, Jenkins, Maven

Team — 6 Developers, 1 QA Specialist, 1 Scrum Master

ABOUT THE CLIENT

Ringier Axel Springer Polska is a part of the European media group Ringier Axel Springer Media AG. It is one of the largest press publishers in Poland. In its portfolio, the company has over 170 titles and websites, amongst them Onet, Fakt, Forbes, and Newsweek Polska.

ABOUT PGS SOFTWARE

PGS Software is one of the largest public listed custom software & services providers in Poland. As an AWS Advanced Consulting Partner, we specialise in Cloud projects – consulting, cloud-native development, application modernisation, & migration. Working according to agile methodologies (Scrum, DevOps, & Continuous Delivery), we create mobile & web applications as well as provide Business Analysis, Visual Design, UX, UI, & QA services to clients worldwide. We have development & business entities in Poland, UK, Germany, & Spain.

For more information about our services:
— please call us at: +44 (0) 770 353 6786
— visit our website www.pgs-soft.com