

USING DATA ANALYSIS TO INCREASE SALES

This commercial company needed to fine tune their sales offerings.



THE CLIENT

Our clients business was based around a web application where NHS staff could register and get access to discounted big brand deals across a whole range of products and services. To help increase click-throughs and advertising revenue, they wanted to analyse visitor behaviour. Doing this analysis would help them design better services for their advertisers and make the site more attractive to users.

Data for Analysis came from Application logs, Web Stats, Geographic location, behaviour on the site, Newsletter subscription and mail campaigns. The Data was a mixture of Cloud based and Flat Files. In addition, the client wanted to potentially offer limited access to their Advertisers as an additional revenue generating service.

THE CHALLENGES

Our Team were engaged to develop an end-to-end solution that would allow all of the relevant Metrics to be brought together in one web-based portal. The challenges were:

- We had to create a secure registration and authentication process for different personas. One would be staff members who had full access. Another would be the advertiser who could only get access to data relating to services they had purchased.
- Privacy: Due to impending EU regulations and the GDPR, we had to ensure that the Visitor behaviour stats for the Main site were cookieless.
- ETL design & implementation: The Data was a mixture of Google sheets accessible only from Sharepoint and Cloud-based Data sources accessible via an API. Batch jobs to extract the data needed to be scheduled across different cadences and the data stored in an Azure SQL Server DB.
- Filtering Data: The analysis filtering offered on the portal needed to be closely aligned with the Data Analyst requirements for maximum ROI.
- Geographic Analysis: Our client also requested that we map the visitors by NHS Trust with a traffic-light type colour coding based on visitor numbers.

AT A GLANCE

Challenges

- Multiple Data Sources
- Different Persona Access Rights
- Custom Data Mapping based on NHS Trust service areas

Services Delivered

- Azure Data factory
- Web Based Analytics
- Django/Python Web Portal application
- Training & Knowledge Transfer



"Our Software Developers & Data Engineers, focus on making our clients' data understandable, helping them gain new insights and improve their service offerings"

Thomas Madden

Managing Director

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TECHNOLOGIES USED

Our Team used a variety of technologies based around Extract, Transform and Load;

- Azure Data Factory – Linked Services using APIs to Web Analytics, Mail Campaign Data, Sharepoint, and Google Sheets. Our Developers created a combination Data pipelines, Data Flows and Scheduled Triggers to automate the Extract, Transform and Load of the DB.
- Azure SQL Server: Our Developers modelled the Reporting Datamart around the subject areas and created a series of Views to power the Data Visualisations.
- Django/Python: Our full stack developer created a secure web portal for the persona logins.
- Chart JS: We used the powerful Open-Source Chart.JS Library to chart the data in multiple styles based on the Analysis requirements.
- Azure VM: Our client asked us to create a Linux-based VM in order to host the application in the most cost-effective way.

OUTCOMES

- We split the Data visualisations across multiple tabs – Deals, Newsletters, Activities, Page Types and Audience. Each Tab would trigger the SQL views if selected in order to display the latest data. We used SQL tuning techniques to ensure that each tab view was responsive.
- Using Agile as our Project Mgmt methodology, we were able to ensure regular communication between the development team and our Customer. Agile allowed us to demo features as they were added and get instant feedback from the client on any changes they required.
- Development remained on schedule and in budget. The Site was successfully launched by our client to form part of their enhanced offering to their Advertisers.

GET IN TOUCH

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