Nudge Along

Driving change in customer behaviour

CeADAR — Centre for Applied Data Analytics Research

Hothouse — where business meets innovation
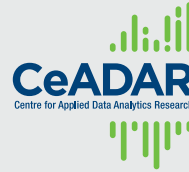
A software tool for driving change in customer behaviour

Nudge Along identifies trends in customer behaviour and drives personalised messages (e.g. text, email or in-app messages) created for the user using a recommendation engine.

Each personalised message is precisely chosen based on the success of previous messages to customers with similar characteristics. The process uses a recommendation engine based on a Case Based Reasoning (CBR) methodology.

The recommendation engine is trained to take into account customer usage profiles, relevant external data sources (e.g. typical weather conditions), any past communications that customer has previously had with the system and the outcome of all prior communications.

The recommendation engine monitors the outcome of the messages despatched, including no action, and feeds this information back into its database in order to improve future recommendations.

Providing analytics-driven insight does not guarantee that people will take note of it and change their behaviour. For example, did a customer identified as a churn risk respond to the proposed intervention? Measuring the success of any analytics project requires looking beyond the insights and into ways of communicating and delivering the insights to ensure that behavioural change takes place. Nudge Along is designed to ensure that analytics insights can actually impact the behaviour of a customer or user.

Applications

Nudge Along can be used by any company in any business sector that wants to create actionable impact from customer data.

To operate effectively, the system requires access to multiple customer touch points across a reasonably large customer set so it can constantly compare customer profiles.

Nudge Along is based on a process of User Monitoring-to-Personalised Incentive -to-Personalised Communications Strategy.

The software demonstrator may be used as a stand-alone application to generate recommendations on communications or can be embedded as a back-end decision-making tool in a fully automated customer communications system.

Opportunity

The big data and analytics market will reach $125 billion worldwide in 2015, according to IDC. More companies will begin to monetize their data, including the use of it to create changes in customer buying behaviour.

Nudge Along may be a valuable potential tool for some companies to influence their customers' behaviour.

Nudge Along was trialled using anonymous customer data provided by an industrial partner. The trials have proven the potential of the software in producing a high level of change in consumer behaviour.

Nudge Along was designed to be more subtle and effective than existing recommendation engines used by commercial organisations, which allow target audiences to easily ignore the recommendations provided. Nudge Along dynamically monitors customer behaviour in order to produce a desired course of action.

Advantages

Nudge Along has a number of advantages over and above existing recommendation engines:

- Impactful Communications – Nudge Along delivers tailored communications aimed at similar market segments based on the success of prior campaigns. This ensures that the most impactful message is sent to the customer every time.

- Database Optimisation – the recommendation engine monitors the outcome of each marketing communication and feeds this information back into the prospect database. This enables companies to improve their quality of information and better shape the content of future messaging.

- Universally Applicable – the software is non industry specific and can benefit any type of data-centric organisation that is seeking to optimise its marketing communications.

- Demand Forecasting – through the refinement and optimisation of its marketing communications, an organisation can more accurately predict expected campaign outcomes.

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Stage of Development

Nudge Along has been developed in the DIT Applied Intelligence Research Centre (AIRC) as part of CEADAR - the Enterprise Ireland funded Technology Centre for Data Analytics.

A prototype demonstrator built using Python has been developed, tested and executed in order to validate the proof of concept. The technology is capable of demonstration and evaluation as a standalone platform but would require further software development to integrate with a users' own system. The software modules are protected as confidential know-how.

DIT is currently seeking expressions of interest from potential licensees interested in using the technology for internal customer communications applications or business partners interested in deploying it as a commercial system. The technology may be licensed through the CEADAR Technology Centre.
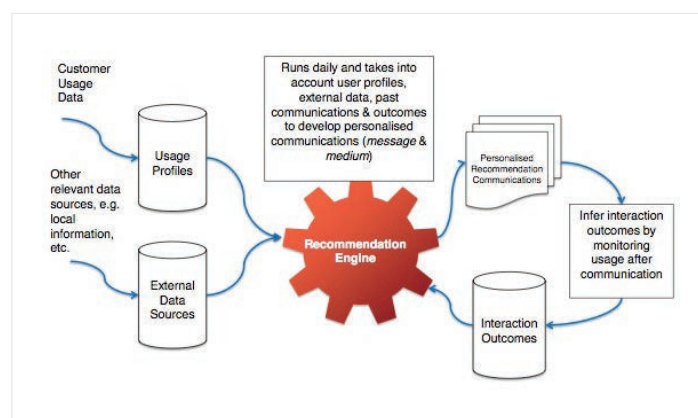
Above: The key components of the Nudge Along system