

Customer: Large UK Retail Banking Group

Predictive complaints analysis

Using Natural Language Processing and machine learning to understand and predict the causes of customer complaints to prevent them from occurring.

Situation

“How do we shift from reacting to complaints to predicting and preventing them?”

Complaints tend to result from the frustration that builds as customers encounter friction navigating processes, systems and bureaucracy on the path to their desired outcome. Customer advisors try to interpret the customer’s description of events, which can be a distorted, partial picture of what actually happened, making root cause analysis more of an art than a science.

Machine learning can change this paradigm. Modern technologies make it possible to see everything that happened leading up to a complaint and to identify the common circumstances that tend to trigger them. Once we know this, it’s then possible to recognise stress points and to predict when complaints are likely to arise.

Value Goal

To predict when a complaint is likely to arise and the circumstances under which it tends to happen; to enable preventative fixes and achieve a 10% reduction in complaints.

Our Approach

Automate complaint categorisation

We changed the way that complaints were analysed, using Natural Language Processing to identify root causes, replacing the existing manual process.

Link complaints to customers and events

We built an automated solution that identified the individual customer that each complaint related to and the timeline of interactions leading up to the complaint.

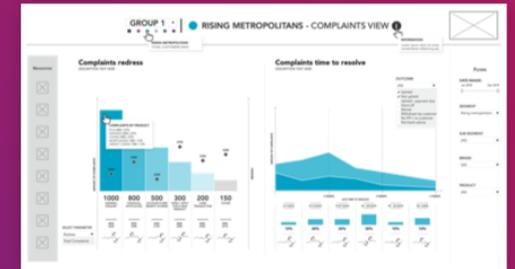
Machine learning path analysis

We used machine learning to identify the features of journeys which were highly predictive of a complaint, from online API calls to specific call handler interactions.

Results

We analysed 43 billion data points in online click journeys, identifying areas requiring priority attention to avoid potential complaints.

We replaced a manual process that took 4 days to classify just 20% of complaints, with a new automated process that takes just 40 minutes to classify 100% of complaints.



Impact

Our analysis directed technology remediation work to areas of the web application which were common triggers for complaints. This included enabling them to build prompts offering support to customers at typical friction points in order to improve the customer experience and prevent potential future complaints from occurring. It also enabled operational managers to identify staff who were more highly correlated to customer complaints, enabling targeted training.

