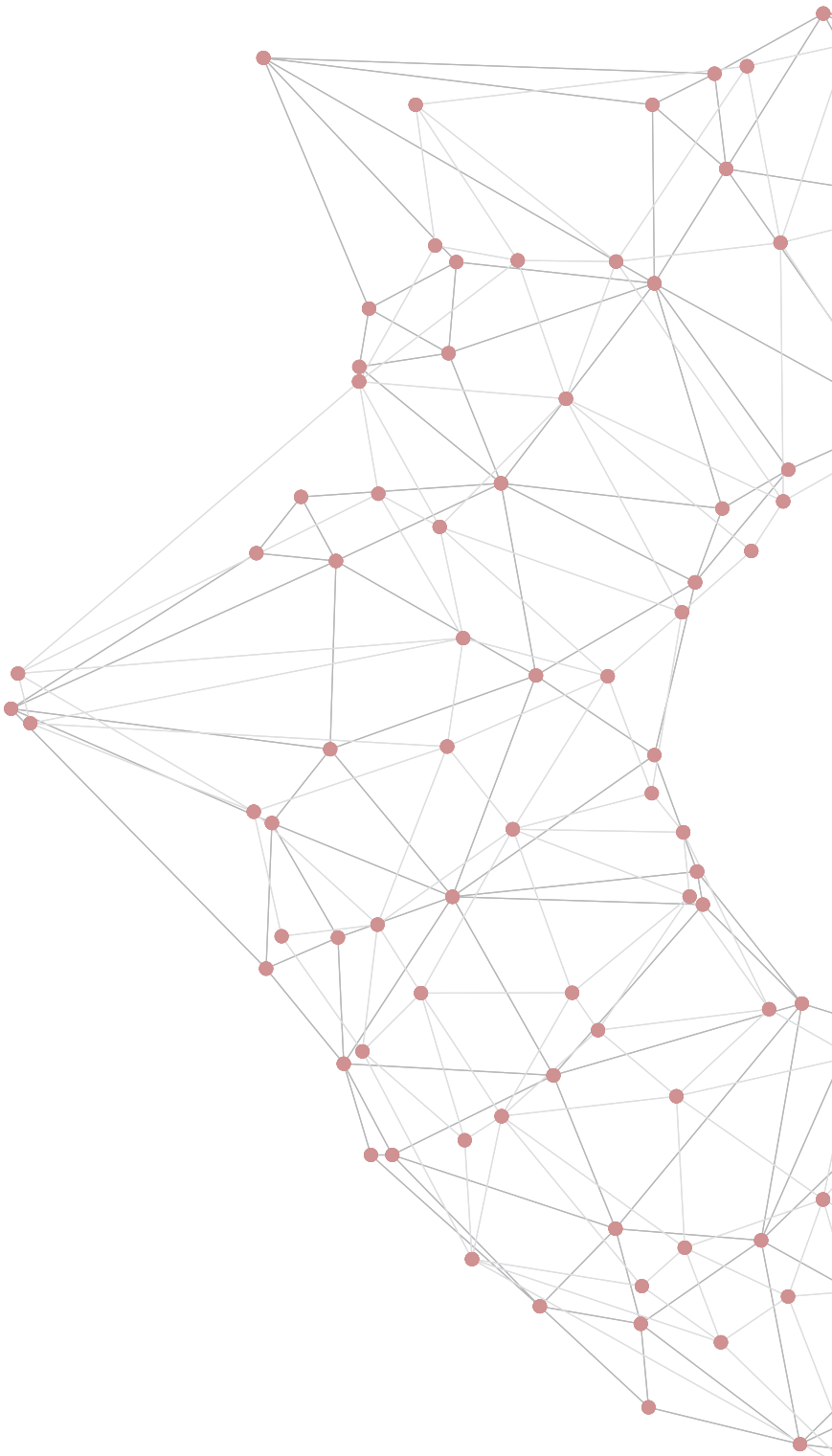
RISKCEDE

Bespoke Data Solutions



OVERVIEW

COMPANY OVERVIEW

RISKCEDE PROVIDES END TO END DATA SOLUTIONS. THIS MEANS THAT WITH ONE SOFTWARE SOLUTION THE CLIENT CAN PERFORM ALL ACTIONS FROM GATHERING AND COLLECTING DATA, TRANSFORMING AND MODELLING IT, PREPARING REPORTS AND VISUALISING RESULTS AND FINALLY DEPLOYING OUTPUT FOR INTERACTIVE ANALYSIS.

USING JUST ONE SOFTWARE SOLUTION, NOT ONLY INCREASES SPEED, BUT ALSO REMOVES POSSIBLE ERRORS AND ANOMALIES THAT MIGHT COME FROM TRYING TO INTEGRATE MULTIPLE SETS OF SOFTWARE. ANOTHER ADVANTAGE IS THAT IT DOES NOT CREATE MULTIPLE DATA SOURCES THAT HAVE TO BE KEPT IN SYNC.

RISKCEDE SOFTWARE IS ONLINE AND DOES NOT REQUIRE ANY DESKTOP INSTALLATION, IT IS PLATFORM INDEPENDENT AND WORKS ON ALL INTERNET BROWSERS. IT CAN BE HOSTED ON SECURE RISKCEDE SERVERS, OR INTERNALLY ON THE CLIENT'S OWN SERVERS. RISKCEDE ENCRYPTS ALL SENSITIVE DATA AND USES USER AUTHENTICATION FOR ALL ONLINE APPLICATIONS.

CONTACT

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RISKCEDE DATA SOLUTIONS

RISKCEDE

DATA SCIENCE PIPELINE

GATHER AND IMPORT DATA

WRANGLE DATA

MODELLING AND MACHINE LEARNING

VISUALISATION

COMMUNICATION

INTERACTIVITY

ANALYTICS

RISKCEDE USES ANALYTICS, PREDICTIVE MODELS, STATISTICAL ANALYSIS AND MODELLING, DATAMINING, SENTIMENT AND WHAT-IF ANALYSIS AND MORE TO PROVIDE SOLUTIONS.

SERVICES

THE SERVICES PROJECT PROVIDES A PLATFORM TO CAPTURE INFORMATION AND TO PERFORM ANALYSIS, E.G. SPATIAL AND TIME SERIES ANALYSIS. IT PROVIDES FEEDBACK IN REAL TIME BASED ON THE INPUT OBTAINED.

SURVEYS

THE SURVEY APPLICATION IS USED TO BUILD IN DEPTH ANALYSIS ON PARTICIPANT PERCEPTIONS.

THE BIGGEST ADVANTAGE IS THE SPEED AT WHICH THESE SURVEYS CAN BE CREATED AND THE REALTIME FEEDBACK GENERATED FROM IT.

CLIENTS & PROJECTS

- HEALTHCARE MARKET
  INDIVIDUAL SCHEMES
  BOARD OF HEALTHCARE FUNDERS.
- FLEET MANAGEMENT
- INSURANCE AND FINANCIAL SERVICES
- AGRICULTURAL
- SMALL STARTUPS

AND MANY MORE...

ABOUT US

RiskCede provides end to end data solutions. This means that with one software solution the client can perform all actions from gathering and collecting data, transforming and modelling it, preparing reports and visualising results and finally deploying output for interactive analysis.

Using just one software solution, not only increases speed, but also removes possible errors and anomalies that might come from trying to integrate multiple sets of software. Another advantage is that it does not create multiple data sources that have to be kept in sync.

RiskCede software is online and does not require any desktop installation, it is platform independent and works on all internet browsers. It can be hosted on secure RiskCede servers, or internally on the client's own servers.

RiskCede encrypts all sensitive data and uses user authentication for all online applications.

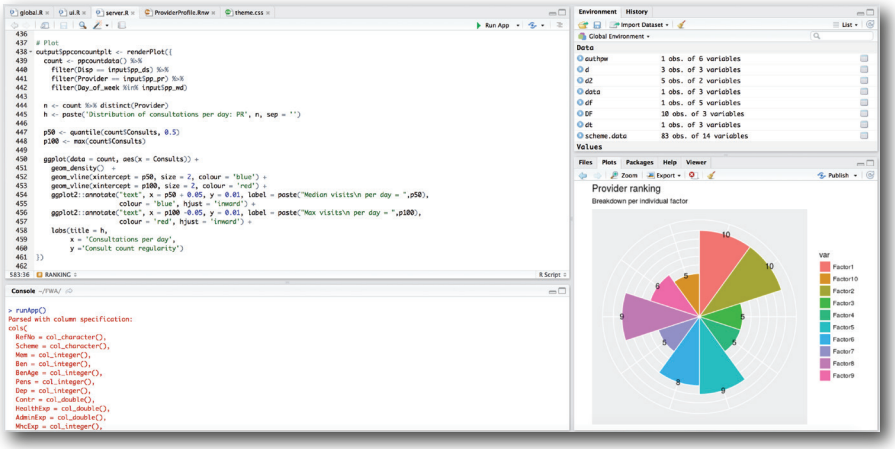


Figure 1: Data mining

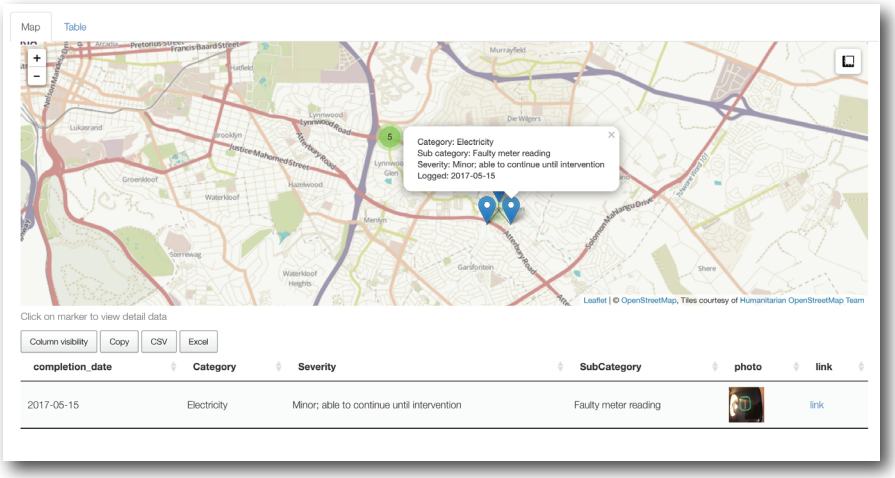


Figure 2: Spacial data

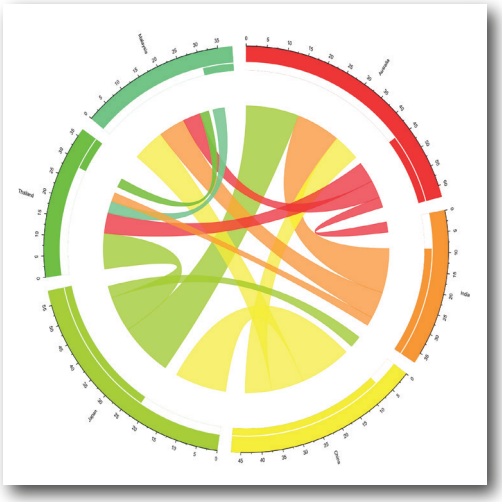


Figure 3: Migration visualisation

Our time to market is extremely fast. Using our combined experience of data products in a wide range of markets, we are able to assist clients in creating project specifications that will ensure their needs are met.

RiskCede follows the principals of reproducible research and as such only use scripting for our analysis and modelling. For example, we never capture data, we always use scripts to gather data, thus whenever the underlying data change, it will automatically be updated in all models and calculations by rerunning the data script.

DATA SCIENCE PIPELINE

Gather and import data. The process of getting data into a model for analysis is different for each different source of data, internal or external databases, flat files such as csv, excel files, geographic or sensor data, or even data published on websites. The RiskCede platform provides processes for importing each of these sources of data, thus rather than using various manual techniques, RiskCede deploys standardised scripts for getting the data. Also, since it is scripted, it is easy to accommodate changes in the data structure, or simply to upload newly updated data.

Wrangle data. RiskCede applies the principles of 'tidy data', a specific format for all data. Once data is in a tidy format, all models, analysis and reporting can use this single format as input.

Modelling and machine learning. Machine learning techniques are used for regression and classification models. The advantage of doing this in one platform is that the data is readily available and does not have to be exported to another system for analysis.

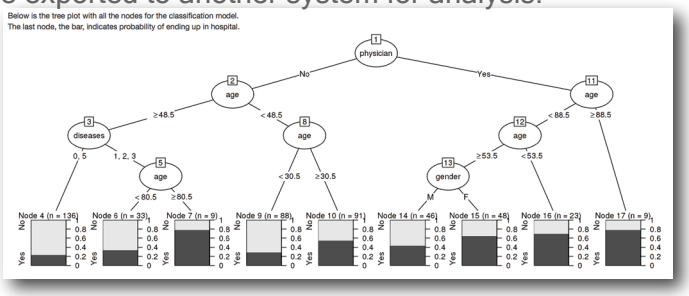


Figure 4: Machine learning

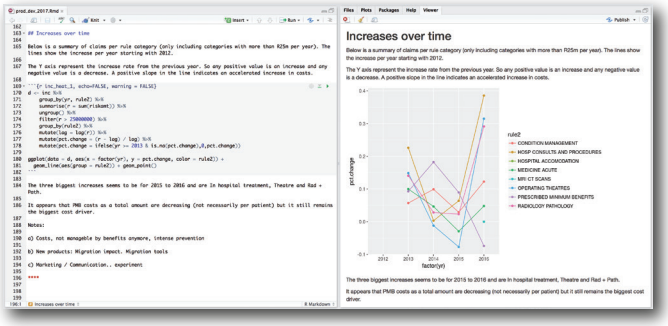


Figure 5: Dynamic reports

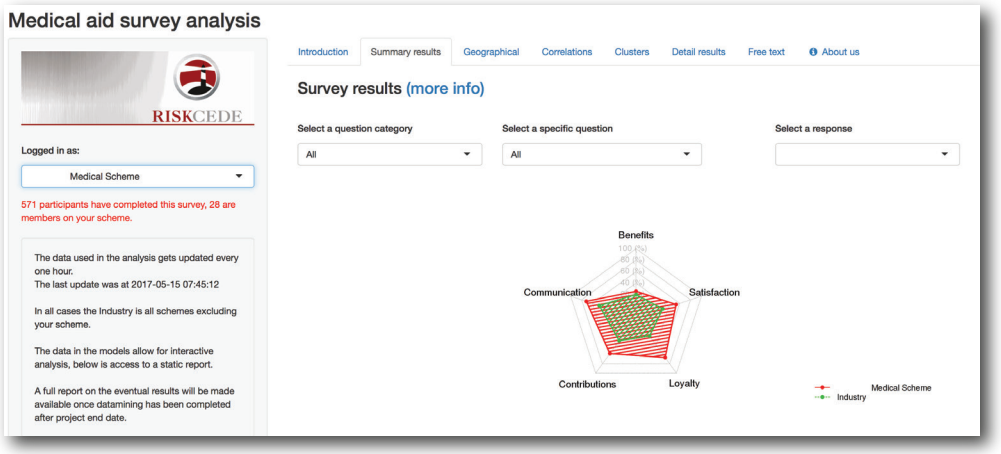


Figure 6: Interactive application

Visualisation. RiskCede uses a large library of graphing tools to apply the best graph to the result or analysis. Illustrating results visually is an important part of the data science pipeline.

Communication. Yet another advantage of using a single platform is that the results and findings of the modeling and data mining stage can be directly embedded in reports. This means that each time a model is rerun, or a data source changed, it is not necessary to copy results over to a report, the report is simply rerun, new data is pulled in, analysis is performed and a new updated report is produced.

These reports can be automated to be emailed to a list of users, either on a time based cycle or each time certain events take place, e.g. after a certain amount of sales.

Interactivity. The final part of the solution is interactivity, where users can change input parameters or output types themselves and view the results in an online application.

PLATFORM & PROCESS FLOW

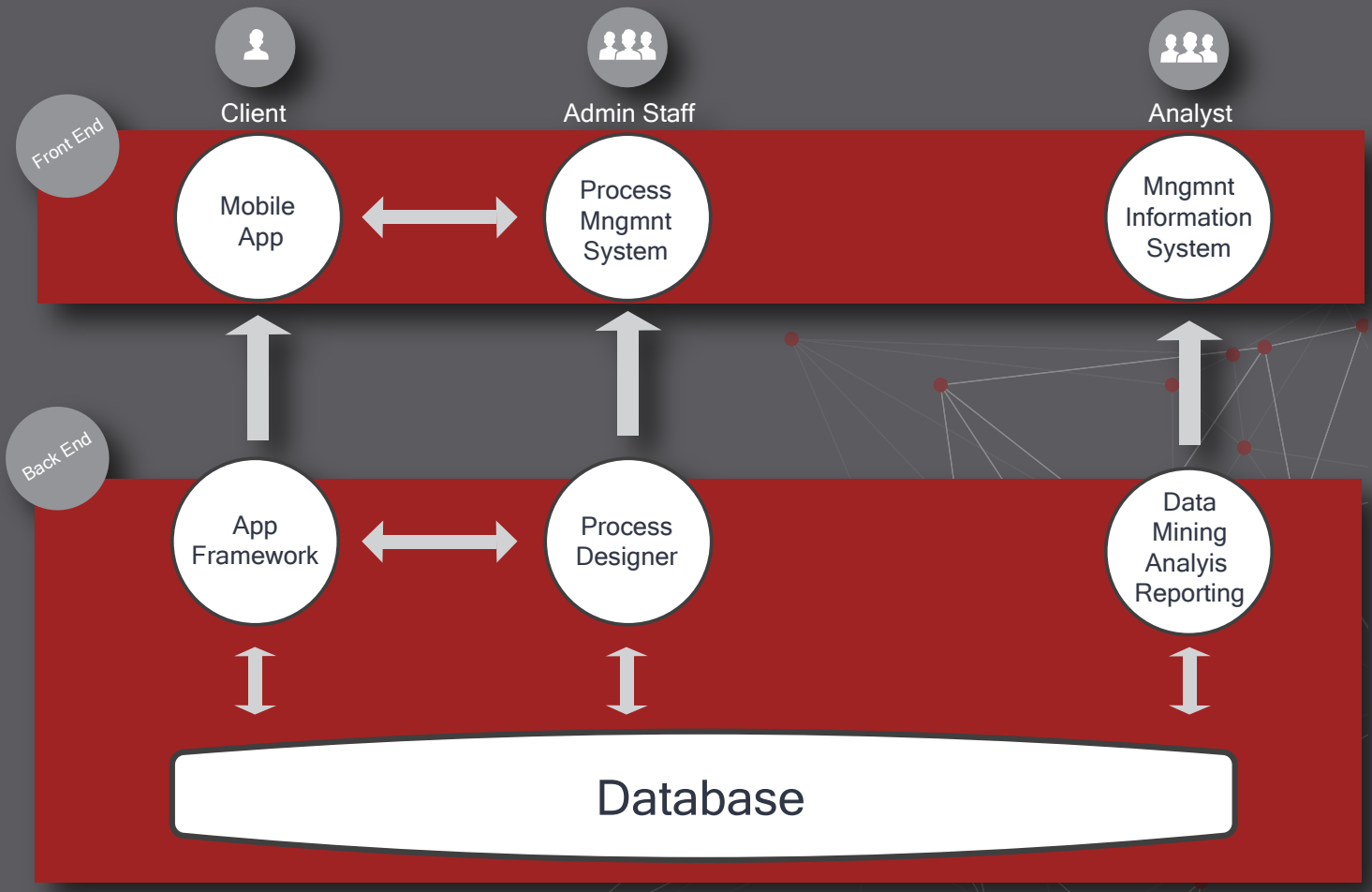


Figure 7: Platform

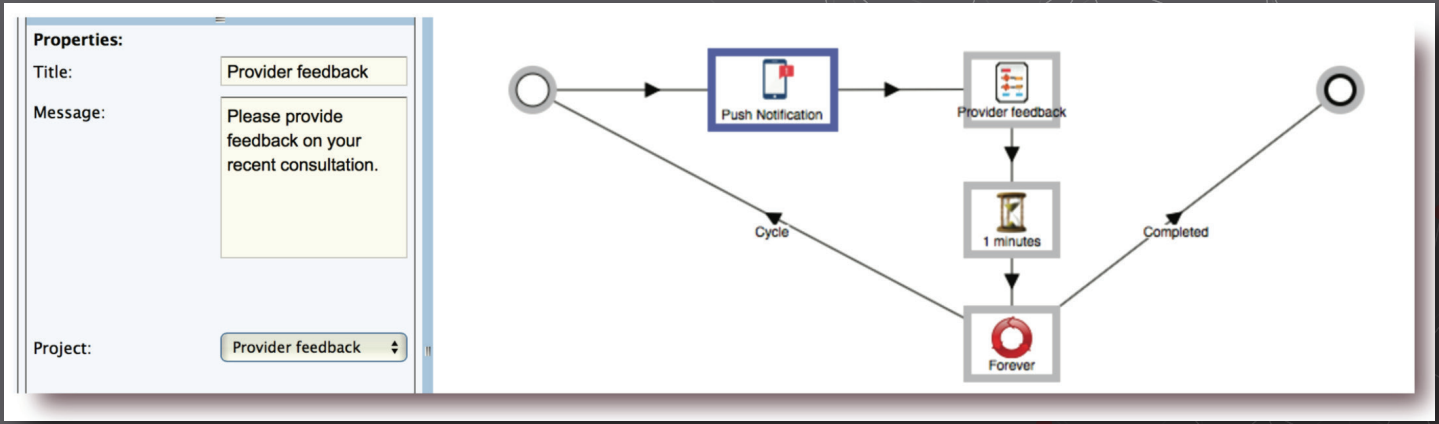


Figure 8: Process Flow

DASHBOARDS & MOBILE

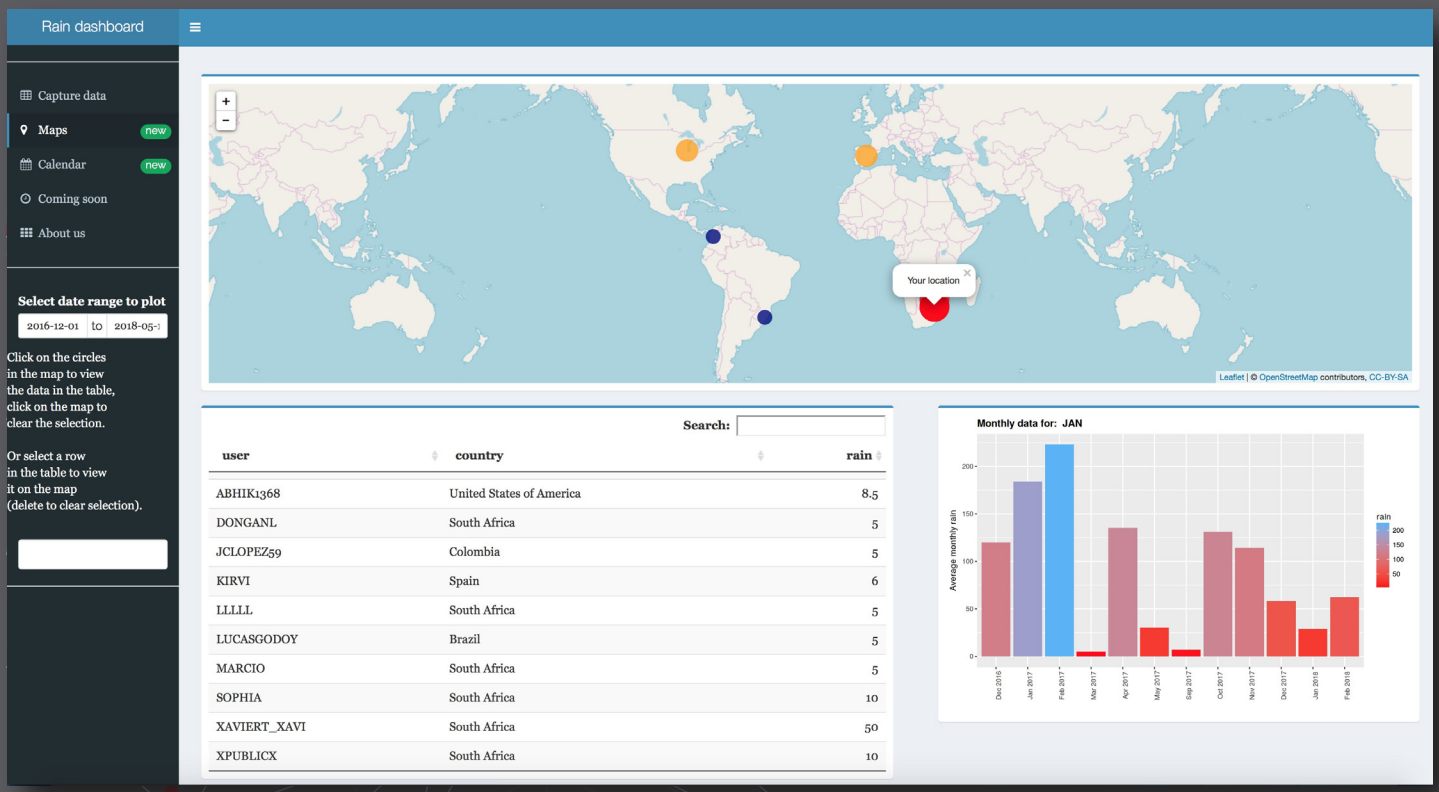


Figure 9: Dashboards

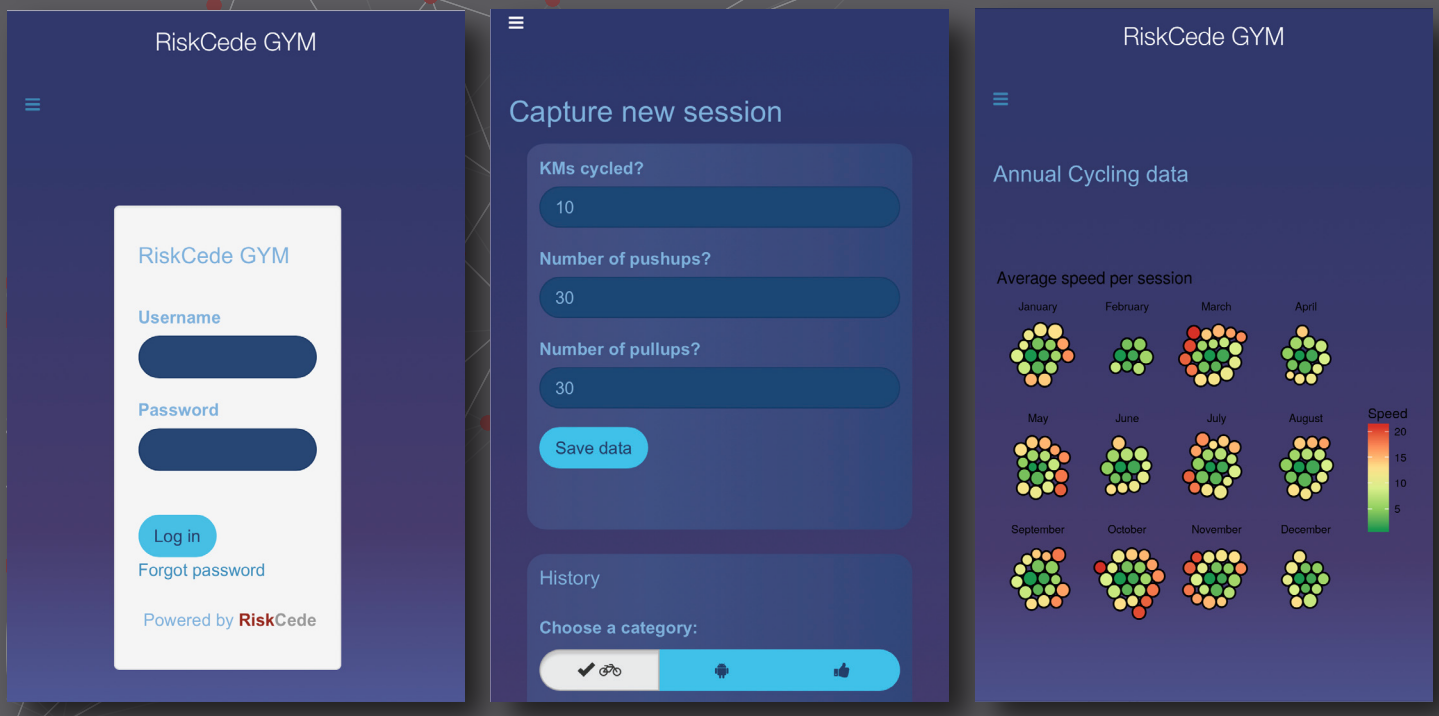
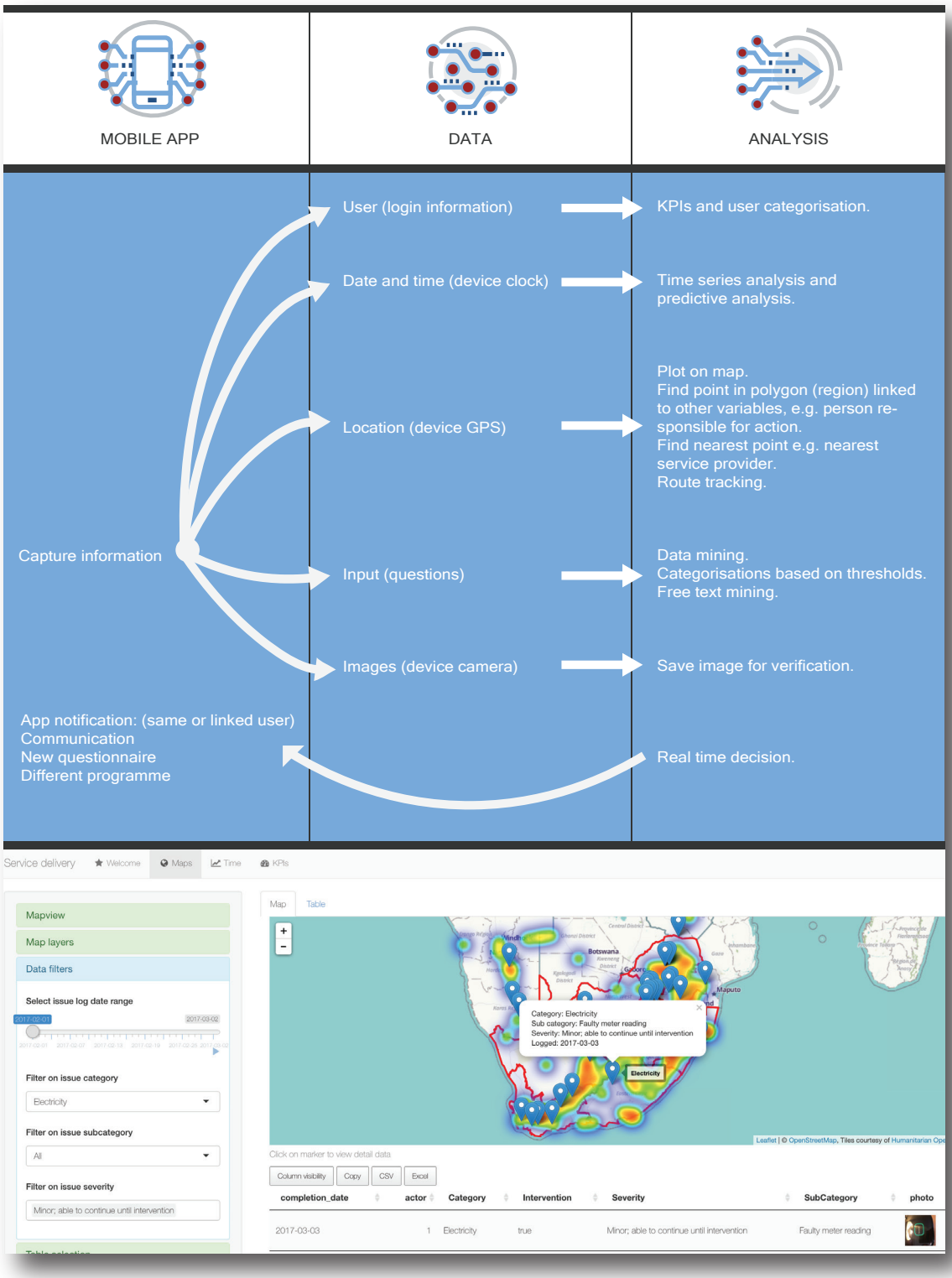


Figure 10: Mobile Interface

APPLICATIONS

The RiskCede applications can be applied to various different fields, from gathering census data, performing and reporting on site inspections, monitoring security services, to using the app as a mobile censor. The platform allows for fast design of new programmes that can be deployed in a short space of time. The applications not only allow for data capturing, but can also provide feedback in real time, based on the input obtained.

The analysis side is just as versatile as it is it is hosted online for real-time results where reports can be scheduled to run on a regular basis. The analysis can be used for real-time decisions or data mining and reporting, or a combination thereof.



DATA GATHERING

All analysis and reporting rely on good quality data to ensure accurate and correct results. RiskCede applies the 'tidy' principals to all data ensuring a standardised structure. This applies to all forms of data sources, from transactional data to relational data stored in a database.

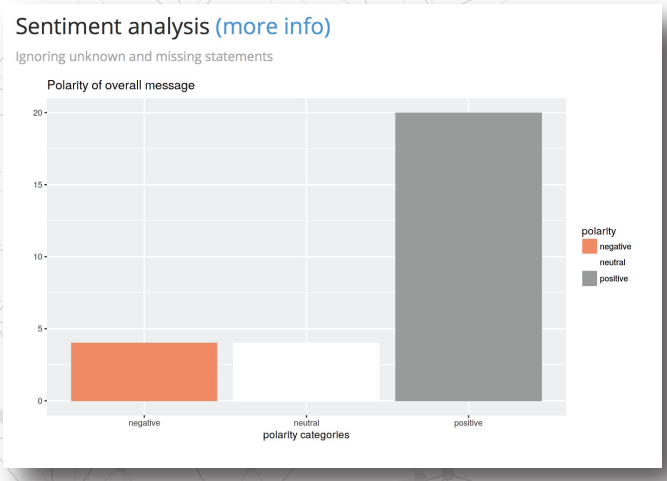
It is sometimes necessary to gather data and RiskCede performs this in some of the following ways, again storing it in a standardised way.

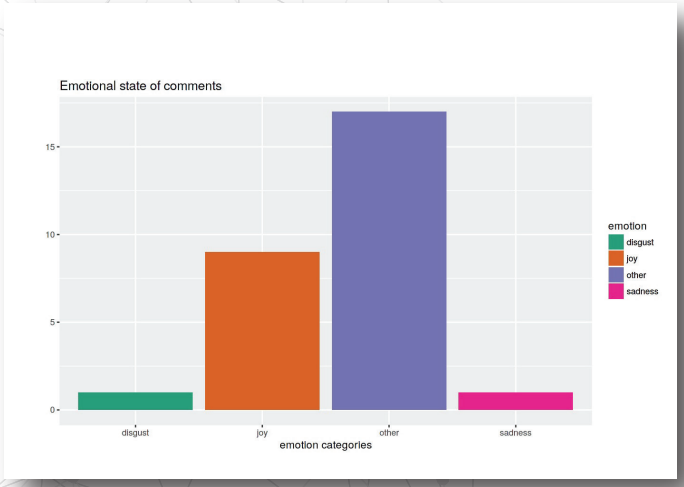
Simulation: Generate data for testing or other purposes. This can be purely random or based on some distribution parameters. Both categorical and numerical values are generated and missing values can also be included to simulate real life events.

Surveys: RiskCede has a survey platform that can be used to run online surveys. These surveys provide real-time results. RiskCede has a lot of experience in survey design and question setup. See a demo survey page here. (www.riskcede.co.za/apps/survey/)

Research: Similar to the survey applications, the research application allows users to gather information from a web frontend. This application adds real-time feedback to the researcher that can lead to addition data gathering or different fields for specific research.

Sensors: Based on IoT workflows, data is generated by sensors, this can be raw data or already processed, however this data is not in a format that can easily be used for analysis and reporting. RiskCede performs some data wrangling and manipulation before storing it in a structured way for future use.





CLIENTS AND PROJECTS

RiskCede is a Data Science consulting business.

PROJECTS

Our initial projects included management information systems, dashboards and reports, that mainly focussed on data mining and analysis.

Data gathering followed, specifically in the form of surveys and research applications.

We have various projects where we use machine learning to predict future events, ranging from insurance claims to driver fatigue.

We perform geospacial analysis on our own application data as well as external data. One example of this service is clustering pests and other factors affecting crops in a recent project in Tanzania.

RiskCede have built a platform that provides end to end solutions for the whole data science pipeline. This platform is supplemented with our own processflow software to allow for the scaling of our data products and automation of tasks and reports.

CLIENTS

RiskCede prides itself in its reputation built up over the years with various clients. We have a strong presence in the healthcare market, ranging from individual schemes to the Board of Healthcare Funders.

We have a client in fleet management where we measure and predict current and future driver risk and track this information over time to provide reporting services.

Our list of clients also includes financial services and various small startups with a need for data science as a service.

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