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## Insurance Product Description and Case Study

## Daric's Insurance Product

Daric's insurance product provides a seamless interface for analysts looking to digitize and bring analytical rigor to underwriting, pricing, and risk management. The tool provides a comprehensive cloud-based workspace with a variety of Access Control Levels, is certified at SSAE-16 compliance, and allows users to review and analyze customer data with integration to over 150 different data points across insurance lines.

Daric also provides an industry leading predictive analytics and machine learning interface that allow for the deployment of risk management strategies and the use of historical data to show the sensitivity of pricing, returns, and risk to specific variables (such as smoking habits or financial behavior in the case of a Life Insurance Policy).

In addition to its extensive suite of native analytics packages, Daric recognizes that data scientists often need to deploy software tools created on their workbench, in R, SPSS/SAS, Stata, and Python. One of the key integration problems faced by our clients is adopting external analytics alongside existing IT infrastructure.

Daric's Analytics servers can expose a variety of R, SPSS, Stata, and Python (numpy) based analytics solutions as a secure web service. These web services can then be integrated seamlessly into existing IT infrastructure or become part of new credit decisioning solutions.

### System Highlights

- Allows data scientists to remain focused on creating the code necessary to drive analytics solutions.
- Flexible console and GUI allow for code created by a data scientist to be transformed into a secure web service.
- Secure web services can immediately be integrated by system integrators and application developers into Web, desktop and mobile applications.

- Allows for macro-integration with your business intelligence dashboards and Excel spreadsheets.
- API-based web services integrate with existing enterprise security solutions: Single Sign-On, LDAP, Active Directory, PAM, and Basic Authentication.
- Access privileges already defined by your IT department for existing enterprise users can be used as usual.

### Software-Based Analytics at Scale

- Daric offers the ability to expand and contract operating capacity to effectively scale for varying analytic workloads.
- Daric supports sophisticated load balancing capabilities to efficiently distribute analytic workloads across available resources.
- Daric powered secure API services can handle requests on demand or permit asynchronous scheduling of analytics for background execution in certain cases.

### Case Study

Daric's insurance product was recently deployed across two different product lines to identify pricing inefficiencies in a large multinational insurance company that provides both property and life insurance lines. Daric was used to integrate alternative data sources for property risk, including our proprietary location-based crime score that pinpoints various types of crime risk within 30 meters of a property address, as well as wearable Exercise Meter data that tracks Resting Heart Rates and feeds that information to Daric through an API for a non-invasive measure of heart health.



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On the property line, the product was deployed in two stages. First, over a 3 month period, Daric was used to integrate additional data with the existing underwriting workflow for approximately 7000 applications, allowing underwriters to save their work and collaborate effectively over our proprietary secure messaging and management tools. Secondly, a back-test of 100000 policies to build predictive models for end payouts over two years was conducted using Daric's Predictive Strategy tool. A model to predict payouts was trained on 90000 policies, with a 6 % improvement in the company's Match Index for premiums and eventual payouts.

On the life insurance line, the product was deployed in two stages. First, over a 2 month period, Daric was used to integrate additional data with the existing underwriting workflow for approximately 2000 applications, allowing underwriters to save their work and collaborate effectively over our proprietary secure messaging and management tools. Secondly, a back-test of 12000 policies to build predictive models for end payouts over two years was conducted using Daric's Predictive Strategy tool. A model to predict payouts was trained on 10000 policies, with a 3.9 % improvement in the company's Match Index for premiums and eventual payouts. This would translate into a 3.2 % improvement in the profit margin for payouts vs payments over the lifetime of an average policy.