

SMART-F Simulation & Modeling of Ambiguous Time Series Forecasts

INFORMATION

Location: Canada
Industry: Finance

CHALLENGE

Develop an application that is capable of simulating investor behavior and has access to historical market data to produce metrics for analyzing recommendations for investing under various sets of solution constraints.

SOLUTION

Affinity Systems created a simulator engine to track multiple investment types and designed a data feed to populate a relational database from multiple online data sources.

TECHNOLOGIES

- C#
- .NET
- J
- MySQL
- FAME

BENEFITS

The simulator engine allows the evaluation of recommendations made at arbitrary points in time and can be used from any platform with web capabilities.

Affinity Systems
1599 Hurontario Street, Suite 302
Mississauga, Ontario L5G 4S1

Tel: 905-278-9444
E-mail: sales@affsys.com

For more information, please visit:
www.affsys.com

OSK offers a new tool for quantifying complex investment strategies

OSK Services provides Canadian investors with analysis and with tools for measuring the performance of publications which dispense investment advice.

OSK Services approached Affinity Systems to help them in the development of their premier tool, SMART-F: Simulation & Modeling of Ambiguous Times Series Forecasts. The goal was to develop a facility which could run simulations of investor behavior based on often conflicting or ambiguous recommendations gleaned from advisory publications. These simulations would have access to historical market data against which their constituent actions could be correlated. The result would be a tangible metric for evaluating the recommendations under different scenarios.



OUR SOLUTION



At the core of the solution that Affinity Systems developed with OSK is the simulator engine. Recognizing that the proprietary algorithms used by the engine needed to be evaluated and tuned, Affinity used a rapid iterative prototyping methodology and first created a model of the simulator. This model was written using J, a language ideally suited for developing malleable software quickly.

The model provided immediate feedback to

OSK, who could use it to verify the design and to propose and experiment with refinements to the simulation algorithms, data filters, and rule sets. When the desired results were achieved, the simulator engine was recast in a C#/.NET environment.

The fuel that runs the simulator engine consists of the historical recommendations and market data. Because the goal was to track multiple investment types, Affinity Systems designed a data feed that populated a relational database from multiple online data sources. This feed normalizes trading activity, ticker history, and corporate action history to present a view that allows the evaluation of recommendations made at arbitrary points in time. The facilities of the system were wrapped in a web interface so that they could be accessed from any platform with web browsing capabilities. The result is a powerful tool that can be used to quantify the outcomes of complex investment strategies in the real world.