

POULIN • HUGIN

PATTERNS & PREDICTIONS

Dear Investment Manager:

The long-term success of hedge funds, and their ability to outperform competitors, is dependent upon developing and refining a proprietary research capability that enables you to:

1. Uncover market inefficiencies and the windows of opportunity in which to exploit them.
2. Identify investment risks and establish the means to track and manage them.

As an international leader in Bayesian-based multi-factor analysis modeling software, Poulin-Hugin can help. I'm writing to introduce my firm and our powerful, customizable analytics software and to propose we meet.

We're Internationally Recognized Experts In Multi-Factor Analysis Software

Poulin-Hugin is an international software firm whose business divisions include the U.S. headquartered Poulin Holdings LLC (Boston) and Denmark headquartered Hugin Expert A/S.

Our software has been adopted by leading R&D departments in 25 countries and is used where reasoning under uncertainty is required. Bayesian-based multi-factor analysis is particularly useful in areas such as decision analysis, decision support, prediction, risk management and safety assessment, diagnosis, health monitoring and troubleshooting. Our clients include Fortune 500 companies and other global multinationals, the Defense Departments of many NATO member nations and premier research labs.

Hewlett-Packard thought enough of our company to become a minority stake owner in 1998. As Hewlett Packard had commented: "Hugin Expert's products are, quite simply, the best in the industry. They have the highest performance Bayesian belief inference engine and the most scalable design. They maintain close ties to state-of-the-art research in the field and incorporate the latest innovations in their products. We partner with Hugin Expert, because we know their products can give us an edge in creating smart e-services. Most of these e-services demand that context, experience, risk, and uncertainty are rationally factored into the decision-making process. Bayesian belief network technology, and Hugin's products in particular, excel in this regard."

Our same tools and capabilities that help these clients have been specially customized, under the Poulin-Hugin brand name, to help you and your hedge fund with data mining for pattern analysis/recognition, time-series analysis, correlation analysis, prediction models, volatility projections and asset allocation decision making.

The Benefits of Bayesian

Bayesian-based investment analytics provides the hedge fund manager with a compact, intuitive and efficient graphical representation of dependence relations between the myriad factors that can influence an investment decision. The graphical structure reflects properties of the problem domain in an intuitive way, which makes it easy for non-experts of Bayesian-based modelling to understand and build this kind of knowledge representation.

Poulin-Hugin software can enable you to develop your own custom model and run analysis using any variables/factors you wish (e.g., stocks, indices, other factors). You can import historical data and run real time data feeds as well (e.g., from P/Es to moving averages, etc.). In constructing your model you easily aggregate a series of factors, each of which you can rank and/or give weight to in your model. Best of all, our process enables you to easily visualize the construction and interrelation of the multiple factors comprising your model.

Consider this brief, customized example below. Let's say you run a long/short strategy and retail is one of the sectors you follow. You have three investment action options (known in Bayesian parlance as the *problem domain*) to consider: go long, go short or do not invest in the sector at this time. You want to determine when is the opportune time to go long or short the sector.

Long, Short or No Action

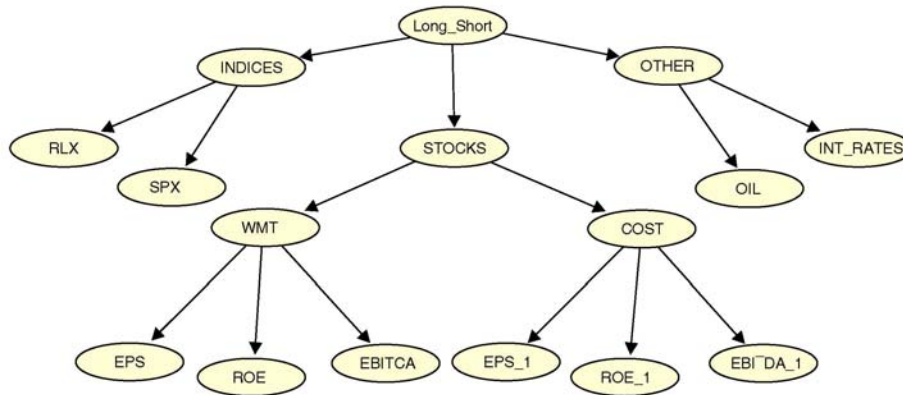
NOTE: Due to space constraints this example contains only two each of indices, stocks and other factors.
 Also due to space constraints only three stock characteristics are depicted.

Indices: S&P 500 Index (SPX) and S&P Retail Index (\$RLX)

Stocks: Home Depot (HD) and Wal-Mart Stores Inc. (WMT)

Stocks - sub-factors: EPS, EBITDA, ROE

Other Factors: Interest Rates and Energy Prices



Long Short	
20.00	Long
29.00	No Action
51.00	Short

In calculating the percentage of what is the highest probability action to take, our software helps you make a more intelligent, informed decision.

Bayesian-based data mining consists of a qualitative part, which describes the dependence relations of the problem domain, and a quantitative part, which describes our belief about the strengths of the relations. In constructing your model (which is known as a Bayesian network) it is possible to utilize both background knowledge such as expert knowledge (user definition of factors) and the knowledge stored in databases (i.e., historical data as well as real-time feeds from Bloomberg, etc., that is structure discovered by the system). This way, you utilize the strengths of both machine and human intelligence. The compactness and efficiency of Bayesian network models have been exploited to develop efficient algorithms for solving queries that could help a hedge fund manager make more educated securities investment and portfolio risk management decisions.

Next Step

Since I've only presented a brief overview of what Poulin-Hugin software can do for you, please visit our website for our most recent case study *Predicting the Closing Price of a Futures Contract*. Furthermore, I'd like to further explain how Poulin-Hugin can help you develop custom applications that meet the specific needs of your business. Please contact us if you have any questions and learn more about how Poulin-Hugin can help you to improve your firm's proprietary investment research capabilities. Thank you for your consideration.

Sincerely,

Chris Poulin, *Principal and Project Leader*

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