Emerging Solutions Coaching and Professional Education

Data and Analytics – A Tough Nut to Crack

It’s no news that data is exploding. Estimates of data explosion suggest a twenty-thousand fold increase in available data between 2000 and 2020. Market studies show that the skills of the “data scientist” are one of the most important gaps in the US workforce. If you are a greenfield company, hiring book-smart rocket scientists from a top institution may be a reasonable approach. But for most companies – especially in traditional industries like Manufacturing, Healthcare, and Insurance – the nuances of the industry and business are intrinsically linked to successfully using data to improve outcomes.

At SIS we believe that getting value from emerging technologies like Advanced Analytics means having people intimately involved with day to day operations also involved with those technologies – or at least cognizant of how those technologies can transform traditional business models and processes.

The ESCAPE Experience

Working with our rich network of partners, SIS has created the EVOLATE™ ESCAPE program. Emerging Solutions Coaching and Professional Education is a mentoring program optimized for onboard professionals at companies looking to “get smart” on the potential of new technologies – and new approaches – to creating industry value. Led by experienced practitioners, ESCAPE exposes small work teams to the concepts surrounding emerging technologies like:

- Advanced and Predictive Analytics
- Data Management and Security
- Machine Learning
- Image Recognition
- Internet of Things
- Edge Processing & Distributed Systems
- Blockchain

ESCAPE is more than just technology education – real world applications of complex technologies are done from a hands-on “business first” point of view. Expert facilitators explore with work teams aspects of industry specific applications – from predictive maintenance in industrial applications to call center optimization in services industries. Participants experience the application of industry proven methodologies which they “make their own” by applying them to their challenges.

A Focus on Advanced and Predictive Analytics

Dig into the heart of leading advanced analytics technologies from established platform vendors, the open source community, and emerging startups.

The Advanced Analytics ESCAPE is an onsite experience for your team, led by a professional trainer with focused industry experience. Five days of hands-on instruction is typically delivered in two separate sections over a 30 day period. Participants first work through a series of pre-defined exercises on included sample data and then have the opportunity to “try their hand” applying their skills on their own data. Outside of class-time, the trainer works with attendees to coach them on data preparation techniques to transform raw enterprise data to useful material appropriate for business analytics.
Classroom Training Focus Areas

The Advanced Analytics ESCAPE leverages IBM SPSS Modeler to explore critical concepts inherent to data science. Classroom training orients participants to the functions of the workbench and the concepts inherent to applied advanced analytics. The education is customized to the client’s needs and can include:

Data Preparation and Data Quality Management
- Data Audit
- Using common functions to cleanse and enrich data fields including mathematical transformations like missing value filling, binning transformation, and distribution modification
- Methodologies for handling sequence data including cross-record functions, restructuring, aggregation, and counter functions.
- Sampling techniques including partitioning and balancing in support of predictive modeling
- Outlier and anomaly detection to reduce skew
- Using looping and conditional execution to improve model performance

Data Preparation Functions

Modeling Techniques
- Machine learning techniques including Random trees, Bayesian Networks, Neural Networks and more
- Segmentation modeling including K-Means and Two Step Clustering
- Supervised Modeling techniques including decision lists, regression, and factor analysis
- Time Series analysis

Coaching and Mentoring

Between live classroom sessions, participants will have access to SPSS Modeler for a period of weeks during which they can continue to experience the use of the tools in their daily work lives. The expert coach will be available for periodic web based coaching sessions to pose ideas, answer questions and offer advice on how to handle particular challenges.

About IBM SPSS Modeler

IBM SPSS Modeler is a data mining and text analytics software application from IBM. It is used to build predictive models and conduct other analytic tasks. It has a visual interface which allows users to leverage sophisticated data preparation, statistical and data mining algorithms without programming.