Advanced Analytics I



# Advanced Analytics I

Lean in Finance in partnership with SSA & Company's, offer Advanced Analytics I, highly refined and innovative program that steps beyond traditional Master Black Belt training. Our participants are taught Lean and Six Sigma tools and techniques while executing a real process improvement project at their home companies.

## Big data's promise is finally here

Business is facing a bold new world: big data, new technologies, and advanced analytics present organizations with unprecedented challenges and opportunities. The explosion of data and new tools allows for new ways to solve most critical business issues: how to cut costs, improve the bottom line, and outperform competitors. This revolution should allow business managers to have new, actionable insight based on the KPIs that represent the most promising opportunities or the most dangerous threats, in realtime.

## But few companies know how to benefit

Even companies that have hired data scientists are ill-equipped to exploit big data because their business managers don't understand how to leverage this new capability. Business teams lack the skills, tools or language required to lead data and technology teams to actionable results, so insights don't lead to action.

# We're bringing something new to business managers through Advanced Analytics 1 – teaching what's possible with data – so that they can effectively use data to drive results and ROI.

Building on 20 years of expertise in enabling data-driven organizations, SSA & Company has partnered with InfomatiX – one of the fastest growing Business Intelligence firms in the world, who has worked with companies like P&G, Nestlé, EY and General Mills. Together, we've developed a new program to help managers understand how to use data science and advanced analytics to drive greater and faster insights to move the business towards better decisions. This course does not aim to turn business managers into data scientists. Instead, our goal is to close the culture gap, providing managers with the skills required to lead data teams and identify opportunities and drive them forward efficiently and effectively.

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## Making Data Actionable

• Focus on insights AND actions: Most big data courses focus on technology and are tailored to technology organizations; our goal is to empower business managers with an understanding of how to leverage new data analytics tools and decision frameworks to solve problems and generate real ROI.

• Customized programs with management level content, tailored for you: Not only are we tool/vendor agnostic, but we adapt use cases to focus on those that are most applicable to your organization.

• Action learning that delivers value off the first tee: Theory without practice has no value. All of our training courses involve practical application of new tools and techniques. Students put their classroom skills to use by delivering a data project, and receive our mentorship outside of the classroom to help them execute their project, which often times pays for the course itself (typically a 5x ROI).

• Option to deploy deeper training with Advanced Analytics II: This course is two additional weeks that builds off of Advanced Analytics I and is designed to deliver deeper credentials in data execution.

# Who Should Take This Course? Advanced Analytics I Driving Data to Insight and Insight to Action

• Business managers and Lean Six Sigma professionals looking to understand how to use big data and advanced analytics to drive real results.

• Professionals at any level of the organization who are responsible for delivering robust business improvements.

# Benefits/Outcomes:

• Close the gap between the Business Management and IT/Data Science professionals by helping them share a common language to solve real business problems.

- Learn how to recognize advanced analytics opportunities in your own industry or function.
- Gain execution experience in Data Mining, Predictive Analytics, and Visualization, and base level knowledge of SQL, R and visualization software (Tableau, Spotfire, Qlikview, Lumira, etc.).
- Completion of a proof of concept or pilot project using advanced analytics techniques and tools.
- Become a data evangelist who can exploit advanced analytics to predict and optimize business outcomes.
- Gain the ability to lead teams of business practitioners, data experts and technologists to drive big data projects forward.

• Learn how to align your organization to better leverage data.

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## Course Requirements:

Two weeks of classroom training (two one-week sessions, each separated by four weeks) An understanding of quantitative analysis Proficiency in using Excel Working knowledge of basic mathematics/statistics (regression analyses, etc.) One potential project that can be completed within a two- to six month timeframe (SSA will help enrollees identify appropriate projects) Windows-based laptop computer with ability to install R, SQL Server Management Studio Express and a visualization tool (ie, Tableau) (participant must have access to the laptop throughout the training)

# Advanced Analytics Price (Euro): €8,250 Registration Fee Includes:

Attendance at all 9 days of classroom training 20 hours of project execution support, to be delivered remotely unless otherwise agreed upon; must be used within 15 months from the start of training A set of electronic documentation covered during the training Daily continental breakfast, lunch, refreshments, and snacks

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# Advanced Analytics I Course Outline A Business Manager's Approach to Unleashing the Power of Big Data Analytics Course Requirements: Advanced Analytics

# Big Data Background

Understand what big data is, why it's important and the art of the possible. Learn the differences between descriptive, predictive, and prescriptive analytics. How to leverage the data-driven decision making framework to go from raw data to information to insight to action.

#### How to Talk to Data

Learn the languages necessary to disintermediate IT. Get a base understanding of SQL and R. (Users with prior knowledge will be able to test out).

## Obtaining, Cleansing, and Storing Data

Where to get data: internal, external sources How to get data: data scraping and data collection How to structure and cleanse data to an analyzable format Storage systems and technologies.

#### Data Mining

Hypothesis driven vs. exploratory approach How to understand data's topology Various analyses with data mining and business-driven use cases, including: Anomaly & outlier detection K-means clustering Sentiment analysis Optimization techniques

## Data Visualization

How to deliver business value through visualizations: data visualization techniques Creating geospatial visualizations Organizational Network Analysis (ONA): Theory & statistics used in ONA Developing 'real-time' dashboards

#### **Predictive Analytics**

Insight, not hindsight: Predictive analytics techniques Choosing what to predict Statistical techniques including linear/logistic regression Machine learning techniques Predictive, decision, and descriptive modeling

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