

# Financial Evolution: AI, Machine Learning & Sentiment Analysis

Workshop



30 October 2019, Zurich

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## Programme

### 9:00 The Evolving Architecture of Automated Trading Systems

*Presenter: Rajib Borah, Co-founder & CEO, iRage*

#### Summary:

By properly leveraging the power of technology, a trader can increase the profitability of an already profitable systematic trading strategy multi-fold. This session looks at the evolution of algorithmic trading systems – and the efficiency introduced at each step.

#### Objectives & learning outcomes:

After this session, participants will be able to understand the different ways in which different components of an automated trading system fit together. This knowledge will enable them to extract higher mileage from their trading systems. Furthermore, this session breaks down technical complexities to functional implications in a way that will be of value to quantitative traders. This and the other sessions are designed in the form of interactive conversations with participants.

### 10:15 Coffee Break

### 10:30 Advancements in the field of high-frequency trading

*Presenter: Rajib Borah, Co-founder & CEO, iRage*

#### Summary:

We will look at new advances in the field of automated trading – both technological as well as structural changes in the industry.

#### Objectives & learning outcomes:

After this session, participants will be able to comprehend the way the automated trading industry is evolving- especially the next generation innovations. This will enable them to make business decisions for the future in an informed way.

### 12:00 Lunch Break

### 13:00 Case studies from High Frequency Trading – market micro-structure in the micro/nanosecond time frame

*Presenter: Rajib Borah, Co-founder & CEO, iRage*

#### Summary:

We will look at a few case studies of how HFT strategies work in the micro-second and sub micro-second time-frame. These case studies will introduce participants to additional aspects of complexity that traders trading in the high frequency time frame have to deal with. We will also look at a few case studies of failures from the world of automated trading – failures which have ruined some of the biggest and most successful automated trading firms.

#### Objectives & learning outcomes:

After the workshop, participants will be able to start thinking about market events from the perspective of tick level events. These will enable them to build newer trading strategies (or implement better execution systems for existing trading strategies), and also be aware of potential issues when they build new trading strategies. The case studies on risk failures will alert them to potential pitfalls and how to guard against them.

### 14:30 Tea Break

### 14:45 Applying machine learning to algorithmic trading strategies - Part I

*Presenter: Douglas Castilho, University of São Paulo and OptiRisk Systems*

The objective of this course is to show you how to create databases from your own strategies and adapt it by them for Machine Learning Methods. Besides presenting different generic algorithmic trading strategies, some machine learning methods are also explained with a discussion about different kinds of validation processes. This section comprises 2 parts; each 1.5 hours duration.

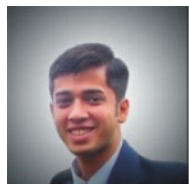
### 15:45 Applying machine learning to algorithmic trading strategies - Part II

*Presenter: Douglas Castilho, University of São Paulo and OptiRisk Systems*

The objective of this course is to show you how to create databases from your own strategies and adapt it by them for Machine Learning Methods. Besides presenting different generic algorithmic trading strategies, some machine learning methods are also explained with a discussion about different kinds of validation processes. This section comprises 2 parts; each 1.5 hours duration.

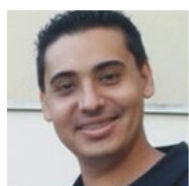
# Algorithmic Trading Workshop

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**Presenter: Rajib Borah, Co-founder & CEO, iRage**

Rajib is the co-founder & CEO of iRage, one of India's leading High-Frequency Trading firms, which potentially manages the broadest exchange-traded option portfolio book in India. He is also the co-founder and director of QuantInsti, an 'Algorithmic and Quantitative Trading' training and research institute which has trained thousands of professionals from over 130 countries. His prior experiences include high-frequency trading on all major US & European exchanges (Optiver, Amsterdam); data analytics technology (Oracle); business strategy for a trading firm & derivatives exchanges (Strategy Consulting, PwC). Rajib has thrice represented India at the World Puzzle Championship. He was also a finalist at the Indian National Biology Olympiad (top 24 nationwide). Rajib holds an MBA from IIM Calcutta, a bachelor's degree in Computer Engineering from NIT Surathkal; and has internship experiences with Bloomberg in New York (derivatives research) & Solutia's EMEA strategy HQ in Belgium.



**Presenter: Douglas Castilho, University of São Paulo and OptiRisk Systems**

Douglas specialises in Computer Science and Computational Mathematics at the University of São Paulo (Brazil), is an associate of OptiRisk Systems and a visiting researcher in University of Porto (Portugal). He obtained his MSc degree in Computer Science in 2014 from the Federal University of Minas Gerais – Brazil. He is researcher and professor at Federal Institute of Education, Science and Technology of South of Minas Gerais. During his career, he was awarded with Outstanding Student prize in 2012, granted by the Brazilian Society of Computing. He has been working with machine learning and financial market since 2010. Recently, he participated as finalist in Data Science Game 2017, an international competition for students held in Paris, France. He researches in areas of Computational Intelligence, Online Social Networks, Deep Learning and Financial Market, with emphasis on High Frequency Trading and Algotrading Improvement Techniques.

## Tickets

Workshop  
Ticket Price

Standard Rate

CHF 475

### Combined discounted price

For a combined discounted price with the conference "**Financial Evolution: AI, Machine Learning and Sentiment Analysis**", please contact

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