

IN SUPPORT OF



ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN TRADING (PART 2)



23 NOVEMBER 2022
8.30PM - 10.30PM



CPE Points Earned:
5 CPE Points



For more details, visit
www.sidc.com.my

DERIVATIVES PROGRAMMES FOR PROFESSIONALS

This initiative is supported by the **Capital Market Development Fund (CMDf)**

WHAT IS THE PROGRAMME ALL ABOUT?

The economic significance of artificial intelligence (AI) is a fundamental question investors face. With the world's top hedge funds using machine learning (ML) to find new investment opportunities, it is imperative for investors to know what kinds of financial applications may be leveraged by this constantly evolving technology. With the exponential growth in data, AI is arguably the best tool to ingest, decipher and learn the patterns of the financial markets.

In the second part of the programme, we get our hands dirty and create our own neural networks. We cover a relatively mature subfield in AI, Natural Language Processing (NLP) that can classify sentiment of financial text; an emerging one, Time Series Classification/Regression, which has previously been dominated by simpler machine learning methods; and lastly perform unsupervised clustering of stocks to identify anomalies/trading opportunities/risk management.

We will go through the end to end pipeline of building these models - from data collection/pulling, to modelling and testing so the participant will be able to apply the templates to their own datasets/use cases.

WHAT DO WE WANT TO ACHIEVE?

This programme is designed to provide participants with hands-on experience in applying AI and ML techniques in trading and its other significant use in the capital market.

WHAT WILL YOU LEARN DURING THE PROGRAMME?

Upon completion of this programme, participants will be able to:

- Enlist the critical components and processes involved before and during Machine Learning research
- Apply code that leverages cutting edge Natural Language Processing tools to classify financial sentiment of news/financial documents
- Implement code that utilise deep learning to classify/predict time series
- Utilise code that cluster stocks with similar risk characteristics

COMPETENCIES

- Foundational (Product) - Capital Market Products (Level 3)
- Functional (Technical) - Digital Technology Application (Level 3)
- Functional (Process) - Derivatives dealing (Level 3)

ABOUT THE SPEAKER



Yi Peng
Senior Quantitative Strategist

Yi Peng is a Senior Quantitative Strategist at a sovereign wealth fund. His primary research mandate involves applying deep/machine learning to identify trading signals across different asset classes/geographies. He loves the speed of innovation in machine learning, and hopes to apply cutting edge research to quantitative finance/financial data science. With a passion for teaching and sharing his love of the subject, he has taught machine learning classes at Singapore Management University (SMU) and online via the No Code Course. Yi Peng graduated with a Masters in Artificial Intelligence and Double Bachelors in Finance and Accounting from SMU.

PROGRAMME OUTLINE

8.30pm - 10.30pm

How to start your own ML research

- Hardware
- Software and programming environment
- Obtaining and cleaning data
 - Text data sources
 - Financial price sources
- Model training and validation
- Model deployment

Demonstrations/Applications of ML in Financial Markets

- Applying/Fine-tuning a systematic and accurate financial sentiment analysis NLP model
- Building a deep learning model to classify/regress stock returns/volatility
- Unsupervised clustering of stocks to identify risk/trading opportunities