

# **From Quantitative Analytics to Data Science in Finance**

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## **Abstract**

Quantitative and Computational Finance (QCF) is interdisciplinary among three fields: computer science, mathematics, and financial economics. Traditionally, quantitative analysts focus on developing and implementing complex mathematical models for risk management, investments, and pricing. Due to the explosion of data generation and the technological revolution, both academia and industry in finance are now putting the focus on the effective use of information, thus giving rise to the field of data science. In this talk, I will first review several approaches of the traditional QCF. Then, I will discuss how to exploit the soft information in finance, which usually refers to text, including opinions, ideas, and market commentary, to study financial risk among companies and to discover new finance keywords. Finally, a brief demonstration on our newly developed web-based information system, Fin10K, will be given to show its ability to facilitate the analysis on textual information in finance.