Mindluster Platform

About the course Mathematical Portfolio Theory

Mathematical Portfolio Theory course in hindi, in this course In this course, we explore the principles of portfolio optimization and risk management using mathematical models.

Business Category's Courses

Course Lesson(37)

Lesson 1 : **Mathematical Portfolio Theory Intro Video**

Lesson 2 : **Lec 1 Probability space and their properties Random variables**

Lesson 3 : **Lec 2 Mean variance covariance and their properties**

Lesson 4 : **Lec 3 Â Linear regression Binomial and normal distribution Central Limit Theorem**

Lesson 5 : **Lec 4 Â Financial markets**

Lesson 6 : **Lec 5 Â Bonds and stocks**

Lesson 7 : **Lec 6 Â Binomial and geometric Brownian motion gBm asset pricing models**

Lesson 8 : **Lec 7 Â Expected return risk and covariance of returns**

Lesson 9 : **Lec 8 Â Expected return and risk of a portfolio Minimum variance portfolio**

Lesson 10 : **Lec 9 Multi asset portfolio and Efficient frontier**

Lesson 11 : **Lec 10 Capital Market Line and Derivation of efficient frontier**

Lesson 12 : **Lec 11 Capital Asset Pricing Model and Single index model**

Lesson 13 : **Lec 12 Portfolio performance analysis**

Lesson 14 : **Lec 13 Utility functions and expected utility**

Lesson 15 : **Lec 14 Â Risk preferences of investors**

Lesson 16 : **Lec 15 Absolute Risk Aversion and Relative Risk Aversion**

Lesson 17 : **Lec 16 Portfolio theory with utility functions**

Lesson 18 : **Lec 17 Geometric Mean Return and Roy s Safety First Criterion**

Lesson 19 : **Lec 18 Â Kataoka s Safety First Criterion and Telser s Safety First Criterion**

Lesson 20 : **Lec 19 Semi variance framework**

Lesson 21 : **Lec 20 Stochastic dominance First order stochastic dominance**

Lesson 22 : **Lec 21 Second order stochastic dominance and Third order stochastic dominance**

Lesson 23 : **Lec 22 Discrete time model and utility function**

Lesson 24 : **Lec 23 Optimal portfolio for single period discrete time model**

Lesson 25 :
Lec 24 Optimal portfolio for multi period discrete time model Discrete Dynamic Programming

Lesson 26 : **Lec 25 Continuous time model Hamilton Jacobi Bellman PDE**

Lesson 27 : **Lec 26 Hamilton Jacobi Bellman PDE Duality Martingale Approach**

Lesson 28 : **Lec 27 Duality Martingale Approach in Discrete and Continuous Time**

Lesson 29 : **Lec 28 Interest rates and bonds Duration**

Lesson 30 : **Lec 29 Duration Immunization**

Lesson 31 : **Lec 30 Convexity Hedging and Immunization**

Lesson 32 : **Lec 31 Quantiles and their properties**

Lesson 33 : **Lec 32 Value at Risk and its properties**

Lesson 34 : **Lec 33 Average Value at Risk and its properties**

Lesson 35 : **Lec 34 Asset allocation**

Lesson 36 : **Lec 35 Portfolio optimization**

Lesson 37 : **Lec 36 Portfolio optimization with constraints Value at Risk Estimation and backtesting**

Related courses

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