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004: Cybersecurity: Using Data Science as a Game Changer - 6.0 CEUs

CEU: 6.0 **Duration:** 15hours 30minutes **Tuition:** $5,700

Course Banner

Teachers:

- Nelson Ilodigwe PhD. (Dr. Ilodigwe holds a B.A. in Political Science and an M.P.A. in Public Administration from Texas Southern University, and a Ph.D. in Management and Organizations from the University of California, Los Angeles (UCLA).)
- Nandini Gupta (PhD, Associate Professor of Finance, Kelley School of Business, Indiana University)

Course Topics:

- Technology/Technologies
- Data/Information Protection
- Cyber/information Security
- 21st Century

Program Locations & Dates:

- Houston, TX USA: Jun 1-5
- Dubai, UAE: Sep 7-11
- Houston, TX USA: Nov 2-7

Program Tags:

- Technology

About Course

In today's digital world, cyber threats are smarter—and so should we be! Cybersecurity: Using Data Science as a Game Changer introduces you to how data science tools can help detect, prevent, and respond to cyber attacks. This course breaks down complex topics like threat analytics, pattern detection, and predictive modeling into simple, real-world examples. Whether you're just starting out or looking to sharpen your skills, this course will help you understand how big data and smart algorithms are revolutionizing cybersecurity and keeping our digital spaces safe. No coding background? No problem—just bring your curiosity!

Course Overview

The global cybersecurity landscape is expanding and changing rapidly. Organizations large and small are responding to heightened risk as traditional security methods give way to the emergence of real-time identity authentication methods.

According to Mordor Intelligence, the cybersecurity market is expected to be worth $352.25 billion by 2026, with an annual growth rate of 14.5%. Accenture polling indicates that 68% of business leaders feel their cybersecurity risks are increasing

However, the low level of existing protection may be even more concerning—on average, only 5% of companies are properly protected (Varonis). A key element in the cybersecurity toolbox is the strategic understanding of the role of data science in increasing cybersecurity resiliency at an enterprise level. Leaders can harness data science methods to manage cyber risk to improve and, in some cases, create new control capabilities to achieve cybersecurity resilience.

Course Objective

The objectives of this course are as follows:

- Learn how to improve your organizations' preparedness and response against cyberattacks and grow your careers as leaders in robust cybersecurity strategies.
- Gain an overall understanding of how data science and cybersecurity work together to create quality data inputs that result in effective key performance indicators (KPIs).
- Learn how using data science methods enhances the resilience of cybersecurity at the enterprise level.
- Learn to collaborate with cybersecurity and data science professionals to create new control capabilities to achieve cybersecurity resilience.
- Learn how to hire and develop talent in these practices at the enterprise level.

Course Outline

- Learn how to improve your organizations' preparedness and response against cyberattacks and grow your careers as leaders in robust cybersecurity strategies.
- Gain an overall understanding of how data science and cybersecurity work together to create quality data inputs that result in effective key performance indicators (KPIs).
- Learn how using data science methods enhances the resilience of cybersecurity at the enterprise level.
- Learn to collaborate with cybersecurity and data science professionals to create new control capabilities to achieve cybersecurity resilience.
- Learn how to hire and develop talent in these practices at the enterprise level.

What Will You Learn?

- Understand the foundational principles of telecommunications regulation
- Identify the roles and responsibilities of regulatory authorities
- Evaluate the impact of liberalization in telecom markets
- Analyze challenges and solutions in regulating new technologies
- Explore global best practices in telecom policy and compliance
- Apply regulatory frameworks to real-world telecom scenarios

Why This Course Matters

Sarah Whitmore
Senior Policy Officer, United Kingdom
"The course offered valuable insights into how data-driven technologies are influencing cybersecurity frameworks. It gave me the confidence to lead smarter policy initiatives."

Faisal Al Dhaheri
Deputy Director of Cyber Policy, UAE
"This program clarified the intersection of data science and cybersecurity. It helped me understand where regulation should evolve to better protect our digital future."

Course Content

Module 1: Foundations of Cybersecurity and Data Science
Explore core cybersecurity concepts and the role of data science in threat detection and prevention.

- **Cybersecurity landscape: threats and defense mechanisms**

- What is data science and why it matters in cybersecurity
- Key tools: analytics, statistics, and machine learning

Module 2: Leveraging Machine Learning for Threat Intelligence
Learn how ML models help detect, predict, and prevent cyber threats in real-time.

- Supervised vs unsupervised learning in cyber defense
- Intrusion detection using classification models
- Reducing false positives with intelligent filtering

Module 3: Data-Driven Risk Assessment and Decision-Making
Use analytics to quantify cyber risk, guide decisions, and communicate impact to stakeholders.

- Mapping data to risk exposure
- Dashboards and KPIs for cyber risk management
- Communicating data insights to non-technical leadership

Module 4: Real-Time Monitoring and Anomaly Detection
Detect suspicious behavior in networks and systems using real-time anomaly detection techniques.

- Time series analysis for log and traffic data
- Behavioral analytics for insider threat detection
- SIEM tools and integration with ML models

Module 5: Governance, Compliance, and Ethical Use of Data
Ensure ethical use of data in cybersecurity while meeting regulatory obligations.

- Cybersecurity policies and data governance frameworks
- GDPR, HIPAA, and other compliance essentials
- Bias and fairness in AI-driven cyber tools

Module 6: Strategic Planning and Career Advancement
Position yourself for cybersecurity leadership by aligning data science skills with strategic goals.

- Building a cybersecurity roadmap with data
- Upskilling, certification, and career development paths
- From analyst to strategist: real-world case studies

Target Audience

This course was designed to provide relevant staff, officers, deputy, Managers, managers, mid-level cybersecurity and data science professionals with a strategic understanding of how data science can be used to manage cyber risk, positioning them for career progression as cybersecurity specialists.

Certificate of Completion

Participants who successfully complete the course **"Cybersecurity: Using Data Science as a Game Changer"** will receive a verified Certificate of Completion. This certificate demonstrates your ability to understand and apply data science techniques in cybersecurity, recognize patterns of threats, and contribute to building resilient security systems in modern digital environments.

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