

## HTM508x Artificial Intelligence and Data Analytics in Hospitality Business

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<b>Subject Name</b>	Artificial Intelligence and Data Analytics in Hospitality Business
<b>Subject Code</b>	HTM508x
<b>No. of Credits</b>	3
<b>Total Contact Hours</b>	39
<b>Prerequisite</b>	HTM501x Innovation and Technology Management in Hospitality

### **Subject Description:**

Artificial intelligence (AI) is expected to solve problems and create value in business applications. This subject aims to provide a broad introduction of AI technology and data analytical skills, and enable students to select appropriate methods to solve hospitality business challenges. Students will learn not only the theoretical underpinnings behind AI and data analytical models but also some practice experience in applying these techniques. Further, through the practical analysis of real-world business cases in the hospitality industry, students will have the opportunity to learn about the most popular applications of AI, and develop computational and programming skills using professional software. By the end of this course, students will build new insights of real-world datasets, create visualization charts and plots, and solve challenges in hospitality businesses.

### **Intended Learning Outcomes:**

*Upon completion of the subject, students will be able to:*

1. Examine, apply and evaluate AI technologies and concepts within the context of management and operations of hospitality organizations.
2. Master various statistical, predictive and machine learning models with professional software.
3. Understand the implications of these AI technologies for hospitality business strategy in terms of marketing, operation, and innovation.
4. Apply AI technologies and the learned data analysis skills to solve complex business problems creatively and systematically, and spot new business opportunities.
5. Use data visualization to effectively communicate data analyses results in hospitality businesses.
6. Transfer learned AI techniques and data analysis skills for employment requiring in unpredictable professional environments.

### **Assessment Weighting:**

Continuous Assessment	100%
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### Indicative Content:

1. Introduction to AI
  - AI and the development history of AI in business
  - How does AI affect the hospitality business, including marketing, operation, and innovation
  - How can hospitality business apply AI to achieve the strategic advantage
2. Introduction to data modeling and analytics for decision making in hospitality
  - Statistical models
  - Predictive models
3. Machine learning technologies in hospitality business applications
  - Machine learning model types, such as supervised learning and unsupervised learning
  - How machine learning is deployed in hospitality business to achieve marketing, operational and financial leadership
  - Building machine learning models
4. Data visualization: communicating analytical results in hospitality
  - Fundamentals of visualization
  - Visual analytics with data visualization tool
  - Using data visualization to support hospitality business communication
5. Robotics in hospitality business applications
  - Introduction to robotics as a disruptive technology
  - Human-AI interactions
  - How robotics is deployed in hospitality business
  - How can the hospitality business use robotics to achieve marketing, operational, innovation, and financial leadership
6. Future artificial intelligence in hospitality business and society
  - AI ethical issues related to understanding behavioral norms and ethical standards, safety and confidentiality concerns
  - The impact of AI on the future of hospitality related works/professions
  - The impact of AI on the future of hospitality business, including operations, marketing, innovation, and finance
  - Developing business approaches that leverage AI to generate values