CDS - DATA SCIENCE (CDS)

CDS 4003 Data Science for Business Applications (2-2-3)
Equip students with a sound understanding of the principles of machine learning and a range of popular approaches, along with the knowledge of how and when to apply the techniques. This course focuses on machine learning as an integral tool for data science, including how to use data to automatically understand the world, make complex decisions, and even predict the future. Several algorithms will be introduced along with which language (Python or R) is better suited for which algorithm based on the particular goal in mind. Programming language(s) will be used.
Prerequisites: CIS 3023, CIS 3403

CDS 4103 Data Visualization (2-2-3)
Data visualization aims to unveil the underlying structure of large or abstract data sets using visual representations that utilize the powerful processing capabilities of the human visual perceptual system. The course emphasizes the fundamentals of statistical exploration of data, fitting models to produce specialized graphs to support the exploration of data in a detailed and statistics-oriented manner, and the use of data visualization tools such as Python, R, and Tableau.
Prerequisites: ICT 2013, CIS 2003

CDS 4203 Data Governance (2-2-3)
This course provides an overview of the disciplines of governing data. It includes examining the policies, standards, processes, people, and technology essential to managing critical data to a set of goals. In addition to the extensive overview, the course illustrates the concepts, principles, and best practices using various case studies of Data Governance.
Prerequisites: CIS 2103, CIS 2013, CIS 2313

CDS 4303 Machine Learning for Data Science (2-2-3)
Equip students with a sound understanding of the principles of machine learning and a range of popular approaches, along with the knowledge of how and when to apply the techniques. This course focuses on machine learning as an integral tool for data science, including how to use data to automatically understand the world, make complex decisions, and even predict the future. Several algorithms will be introduced along with which language (Python or R) is better suited for which algorithm based on the particular goal in mind. Programming language(s) will be used.
Prerequisites: CIS 3413

CDS 4403 Time Series for Forecasting (2-2-3)
Equip students with various forecasting techniques and knowledge on modern statistical methods for analyzing time-series data. Students will learn several important tools to provide trend analytics and forecasting based on past data and time series. Students will then be able to apply the tools and techniques of time series analysis to complex problems to reach effective solutions.
Prerequisites: CIS 3023