M. Sc. Data Science

Vision

Our vision is to build a research identity at the confluence of data science and analytics, artificial intelligence, big data and decision sciences and to build an educational identity through leading degree programmes based on curricular innovation and research.

Mission

- To educate students to acquire the required technical and communication skills in order to solve significant problems in business and society.
- To advance the knowledge in data science and multi-disciplinary areas through high- impact research, entrepreneurship, leadership and innovation
- To provide service to the profession, college, community and society

Programme Outcomes

1. Possess a theoretical understanding, explain and critically assess the key concepts and techniques from the disciplines defining modern data science and analytics.
2. Critically evaluate emerging data analysis technologies and how they can be applied to heterogeneous data at volume, scale and types, in order to get insight for business, scientific or social innovation.
3. Analyse in depth how data analysis techniques can be applied to a range of interdisciplinary research areas.
4. Effectively use modern data science programming languages and technologies to scrape, clean, organize, explore, visualize, and model large volumes and varieties of data.
5. Evaluate, select, combine and apply advanced skills, data science tools and techniques in the related areas of artificial intelligence to the design of solutions to data science and analytics tasks.
6. Prepare for careers as data scientists by proposing, planning, developing, evaluating and creating a commercially and/or research-wise relevant project and/or product for business, science and society.
7. Develop professional communication skills (e.g., writing, presentations, interviews, email etiquette, etc.), effective time and resource management skills as well as leadership and team working skills towards meeting organizational goals.
8. Understand, value and safeguard social, legal and ethical use of data that increasingly challenge and confront data scientists while developing data science systems.
9. Learn effectively and independently to acquire new knowledge and skills for the purpose of continuing professional development in related areas of data science.

Programme Specific Outcomes

1. Show mastery over different applications of data analytics namely web analytics, customer analytics, supply chain analytics and social network analytics.
2. Build software applications using new languages and tools such as Neo4J, Tableau, Julia, SpaCy and Rasa
3. Develop a disruptive entrepreneurship spirit and integrate with the data science community.
4. Identify and assess the needs of an organization for a data science task by conducting a needs assessment and communicating data science options and limitations that could meet organizational needs.