1.	Title of the course	Data Science for Software Engineering
2.	Course number	CS507L
3.	Structure of credits	3-0-0-3
4.	Offered to	PG
5.	New course/modification to	Modification To CS5024/6
6.	To be offered by	Department of Computer Science and Engineering
7.	To take effect from	July 2022
8.	Prerequisite	CoT
9.	**Course Objective(s):** To provide an exposure on emerging trends in the area of data science for software engineering with a focus on application of data science and mining methods to analyze open source software repositories and further develop tools.	
10.	**Course Content:** Refresher of data science and data mining methods - Current state of confluence of software engineering and artificial intelligence - Data sources in software engineering - Software data analytics (analysis of various artifacts such as architecture, code, bugs) - Visual analytics for software engineering data - Software reuse and software evolution - Software reverse engineering and reengineering - Analysis of mobile and game software development data - Prediction of software qualities through analysis of software repositories.	
11.	**Textbook(s):** 1. Chiristian Bird, Tim Menzies, and Thomas Zimmermann, *The Art and Science of Analyzing Software Data,* Morgan Kaufmann (2015). 2. Tim Menzies, Laurie Williams and Thomas Zimmermann, *Perspectives on Data Science for Software Engineering*, Morgan Kaufmann (2016).	
12.	**Reference(s):** 1. Ruchika Malhotra, *Empirical Research in Software Engineering: Concepts, Analysis, and Applications,* Chapman and Hall/CRC (2015).	