VIRGINIA COMMONWEALTH UNIVERSITY
COLLEGE OF ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE

SD: Machine Learning for 5G Security Analysis

Learning Outcomes:

The Learning Outcomes include both technical and professional outcomes. Technical outcomes include:

1. Students will learn to develop software solutions for analysis of cyber attack graphs in 5G networks, using programming languages such as Python. They will also learn to use libraries and frameworks relevant to AI/ML and IoT.
2. Students will learn to analyze and interpret data in the context of 5G networks. This includes understanding how to clean, process, and analyze data, as well as how to draw meaningful conclusions from the data.
3. Students will learn to design, develop, and validate AI/ML models for anomaly detection, cyber attack graphs. This includes understanding the theory behind different AI/ML models, as well as the practical aspects of training, testing, and deploying these models.
4. Students will learn about the importance of data security and privacy in 5G networks.

Professional outcomes include:

1. Learning to work effectively as part of a multidisciplinary team. This includes understanding how to communicate and collaborate with peers from different backgrounds and disciplines, and how to contribute to a shared goal.
2. Learning to plan and manage projects effectively. This includes understanding how to define project goals, plan tasks and timelines, manage resources, and monitor project progress.
3. Learning to communicate effectively with a wide audience. This includes understanding how to present technical information in a clear and understandable way, how to write effective reports and documentation.