CSE 4615: Wireless Networks
Assignment-1

Choose one of the topics from the following list and prepare a power point presentation. Your presentation must include the *i)* summary of existing related works and *ii)* detail working principle of at least one promising research proposal. Example papers are listed for your reference, however you are encouraged to consider additional good quality resent research papers. You will work in a group of maximum four students.

I.   **Applying Machine learning for improving medium access efficiency in wireless networks**
     Example Paper:
     1. Guo, Ziyang, et al. "Multi-Agent Reinforcement Learning based Distributed Channel Access for Next Generation Wireless Networks." *IEEE Journal on Selected Areas in Communications* (2022).

     2. Park, Huiung, et al. "Multi-agent reinforcement-learning-based time-slotted channel hopping medium access control scheduling scheme." *IEEE Access* 8 (2020): 139727-139736.

II. **A Survey on Machine Learning-Based Performance Improvement of Wireless Networks: Focusing MAC Layer**
     Example Paper:
     1. Kulin, Merima, et al. "A survey on machine learning-based performance improvement of wireless networks: PHY, MAC and network layer." *Electronics* 10.3 (2021): 318.

III. **A Survey on Machine Learning-Based Performance Improvement of Wireless Networks: Focusing Network Layer**
     Example Paper:
     1. Kulin, Merima, et al. "A survey on machine learning-based performance improvement of wireless networks: PHY, MAC and network layer." *Electronics* 10.3 (2021): 318.

IV. **Improved Medium Access Control Protocols for the next generation Internet of Things/ Wireless Sensor Networks**
     Example Paper:
     1. Khisa, Shreya, and Sangman Moh. "Medium access control protocols for the Internet of Things based on unmanned aerial vehicles: A comparative survey." *Sensors* 20.19 (2020): 5586.