Q1. We chose this topic because it addresses real-world traffic forecasting challenges using cutting-edge technology, combining Federated Learning and Graph Neural Networks (GNNs).

Q3. Our dataset combines real-time traffic data from multiple sources, including traffic speed, volume, weather conditions, and historical traffic patterns from various cities and regions. Specifically Metr_LA, and PEMS_bay

Q7. We chose Federated Learning with GNNs due to GNNs' ability to capture complex graph relationships and federated learning's privacy-preserving aspect for decentralized data sources.

Q12. Tools and libraries used include Python, PyTorch, TensorFlow Federated, Pandas, NumPy, and Jupyter Notebooks.

Q15. Key outcomes include improved traffic forecasting, privacy preservation, adaptability to dynamic graphs, and scalability for urban planning and traffic management.

Q19. End-users, including urban planners, transportation authorities, and commuters, benefit from optimized traffic management, informed urban planning, route planning, and reduced environmental impact.