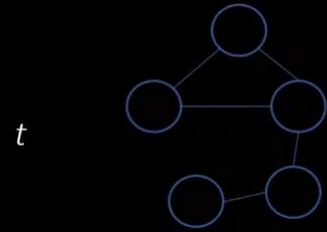
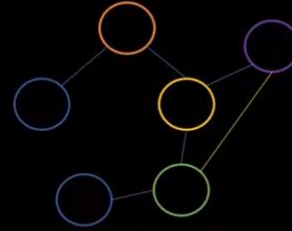
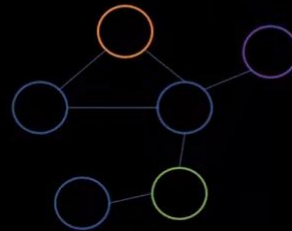
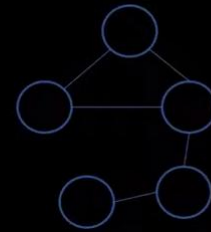


# Temporal Graph Neural Networks

如果图跟时间有关系，该如何处理呢



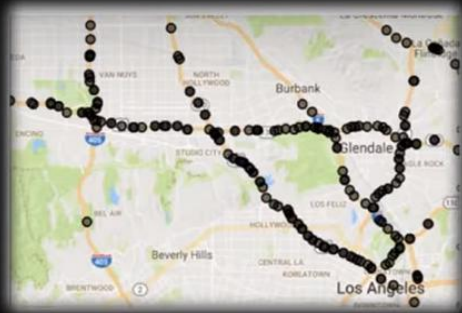
Static Graph with Temporal Signals



Dynamic Graph with Temporal Signals

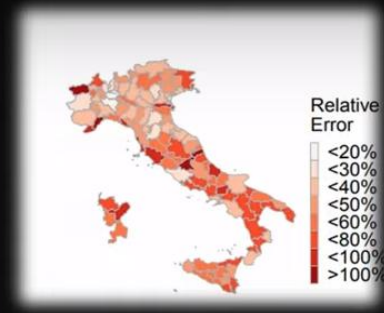
# Temporal Graph Neural Networks

## T-GCN应用领域



Source: DCRNN paper

Traffic Forecasting



Source: Transfer GNN for Pandemic forecasting

Epidemics (Covid Predictions)



Source: mediapipe

Motion Classification

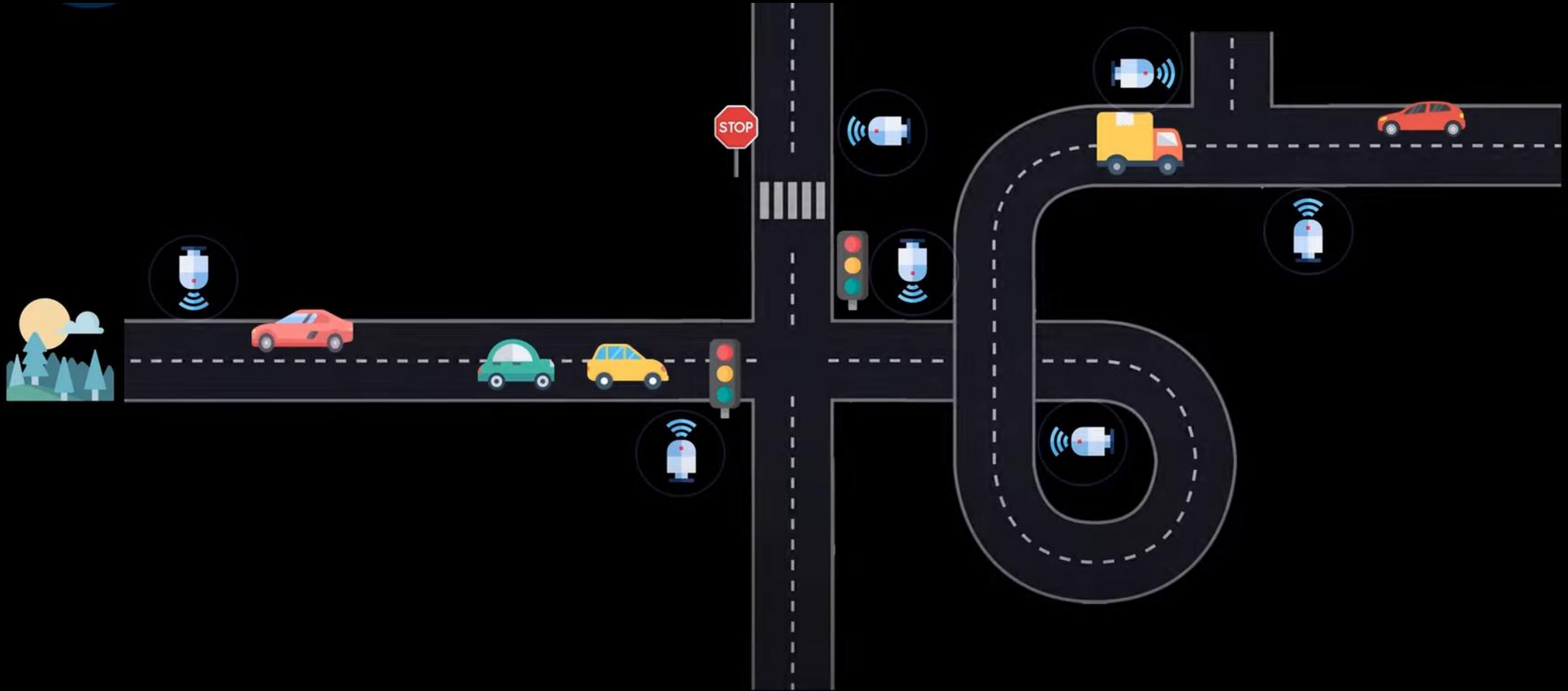


Source: GCLSTM, Simeunovic et al.

Power Systems Forecasting

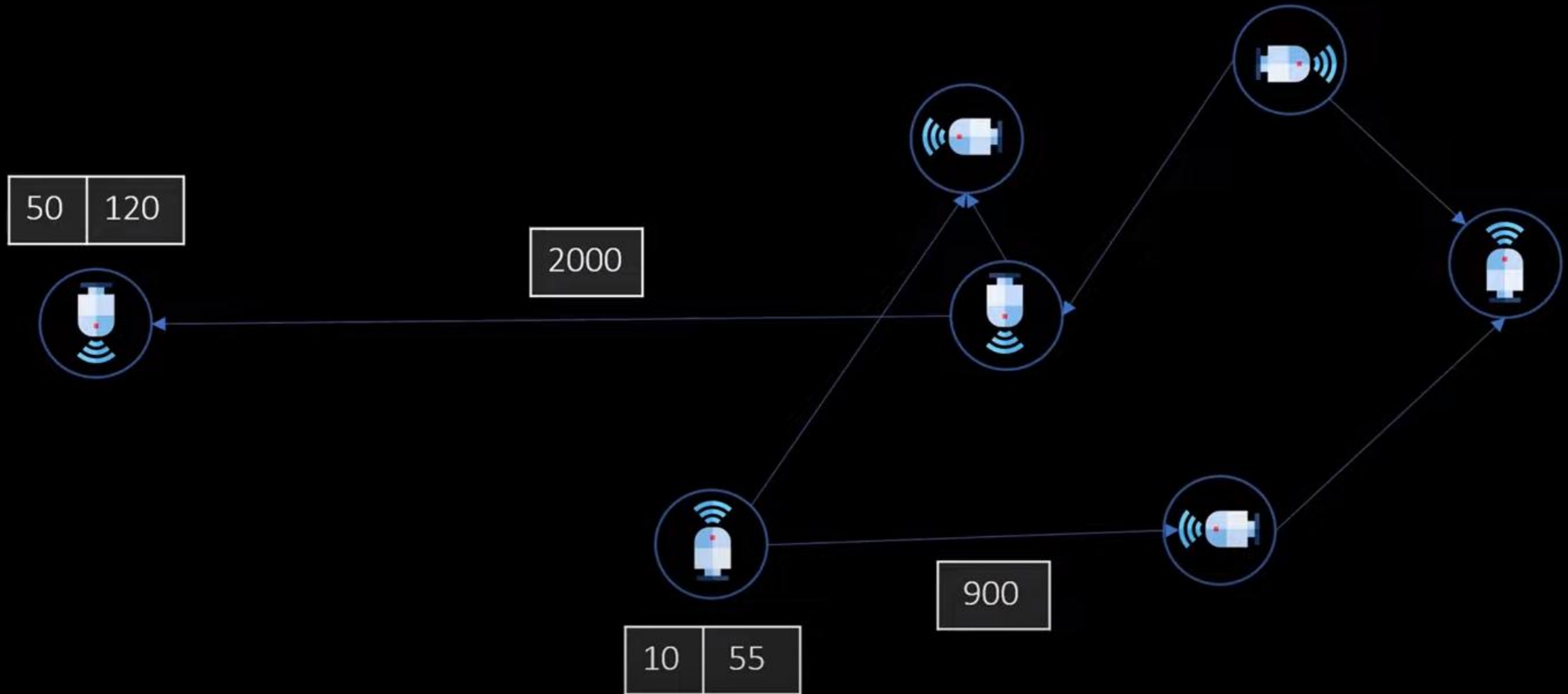
# Temporal Graph Neural Networks

## 交通流量预测



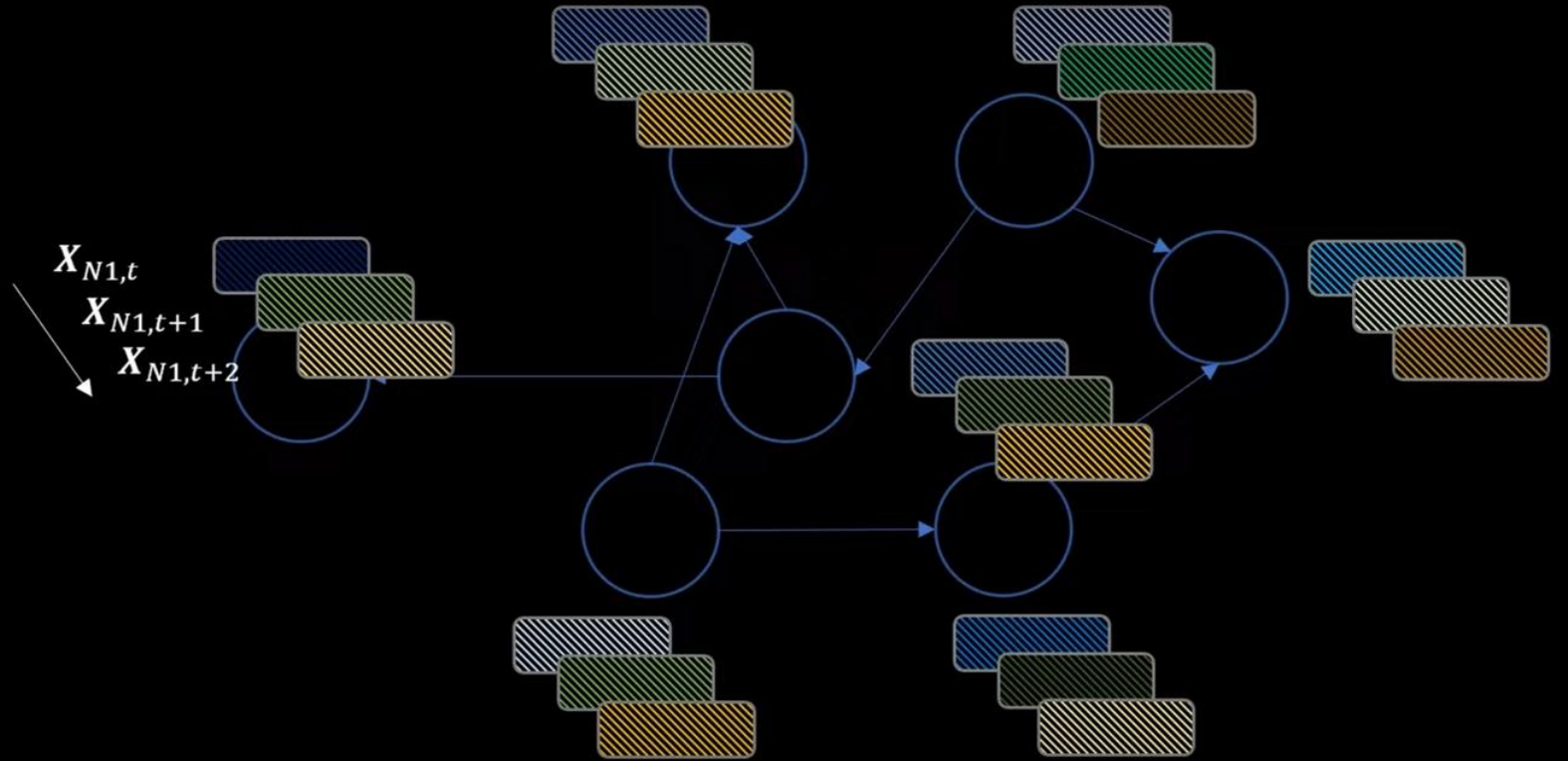
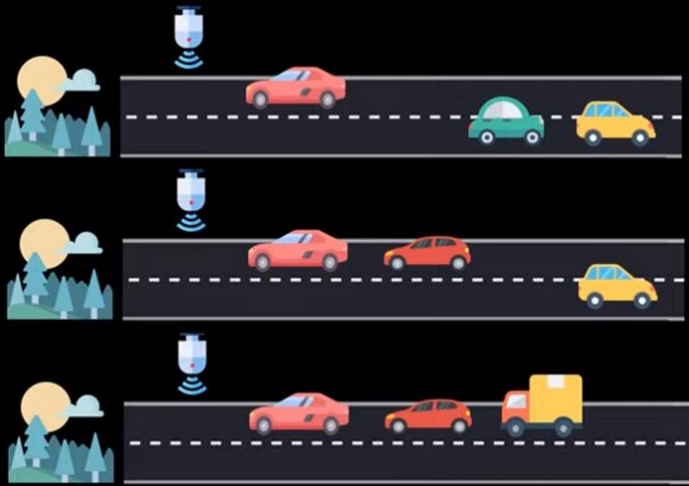
# Temporal Graph Neural Networks

交通网络图(速度,车流/分钟,距离)



# Temporal Graph Neural Networks

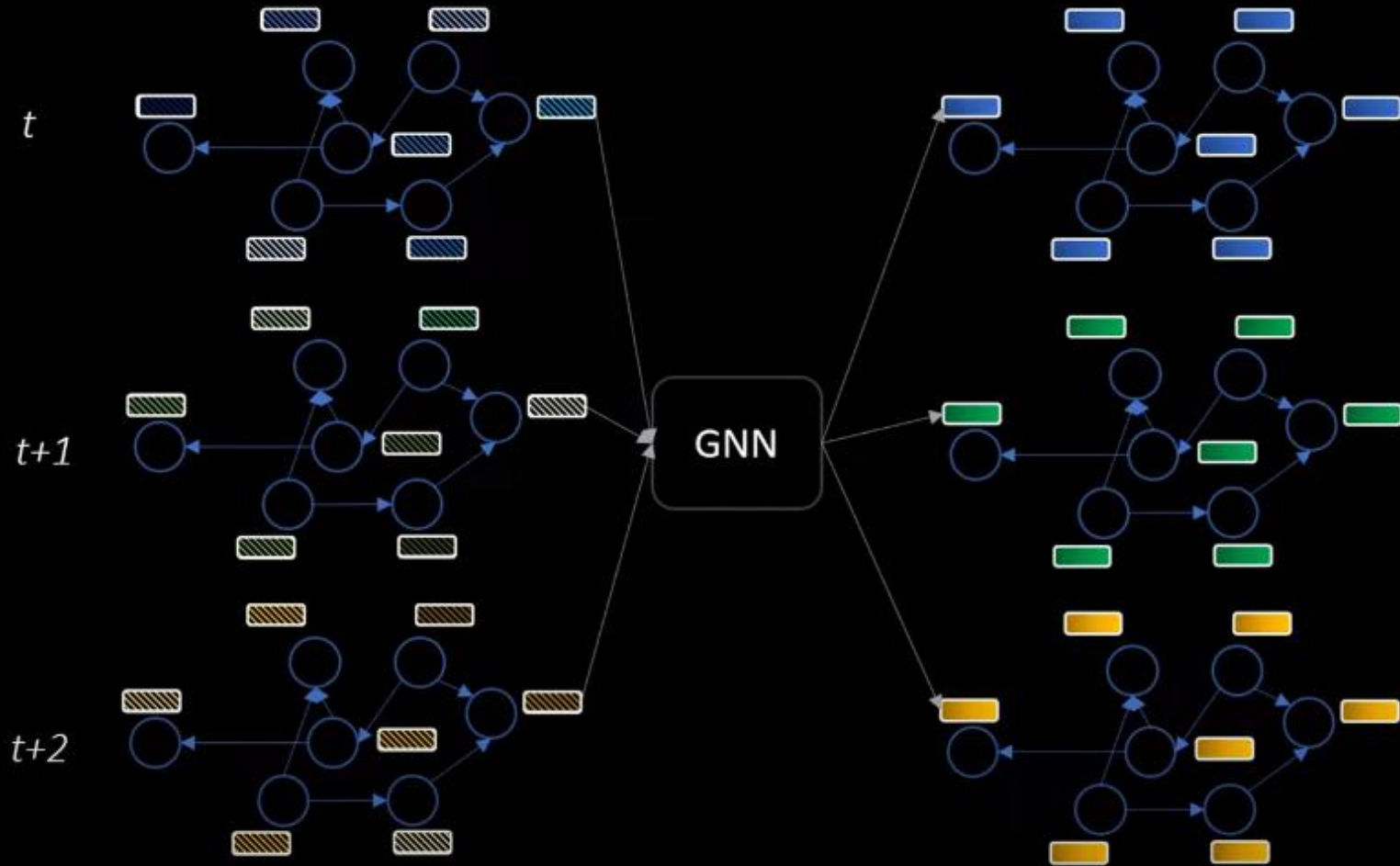
## 构建序列输入





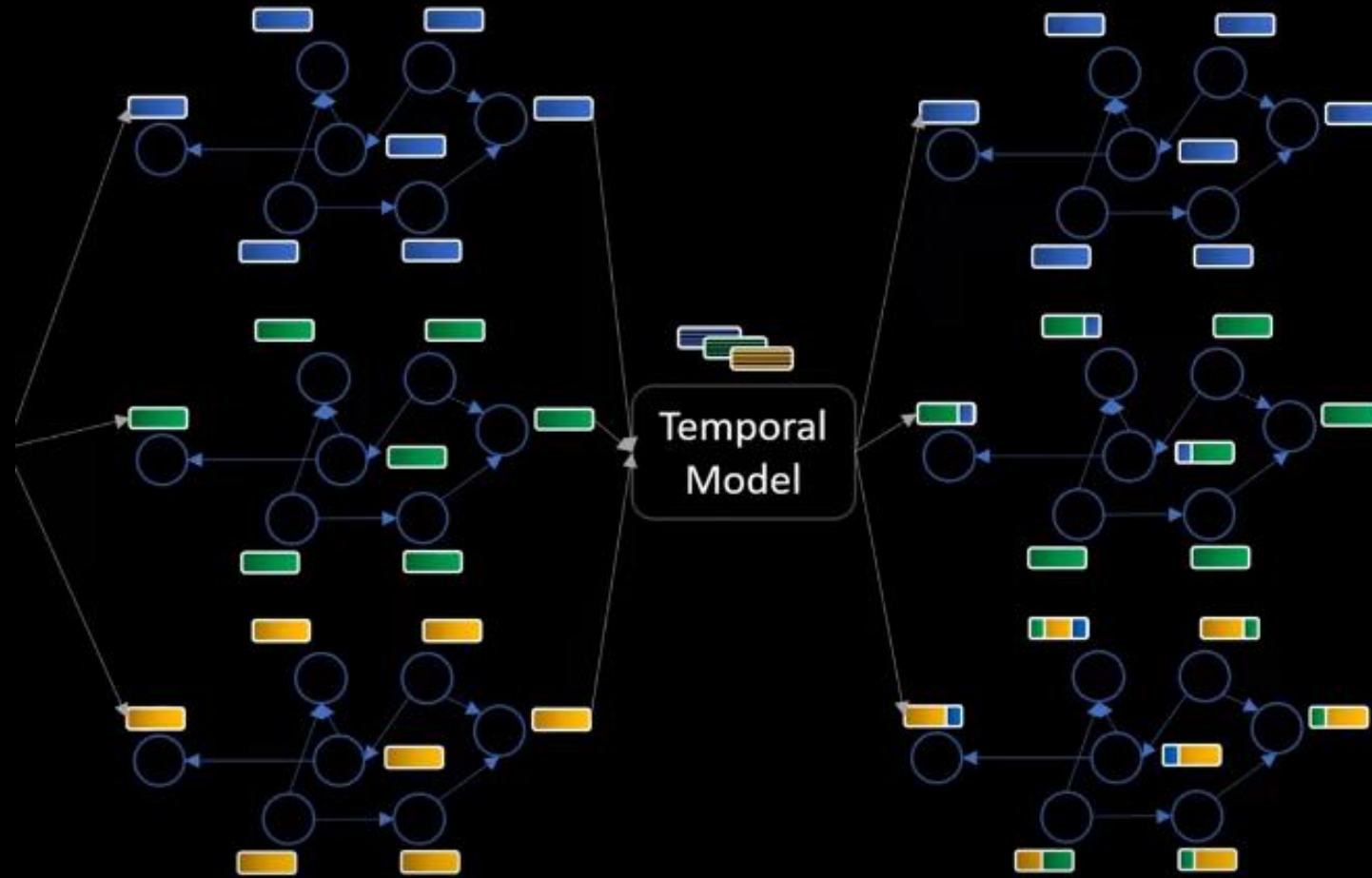
# Temporal Graph Neural Networks

每一时刻都走GCN



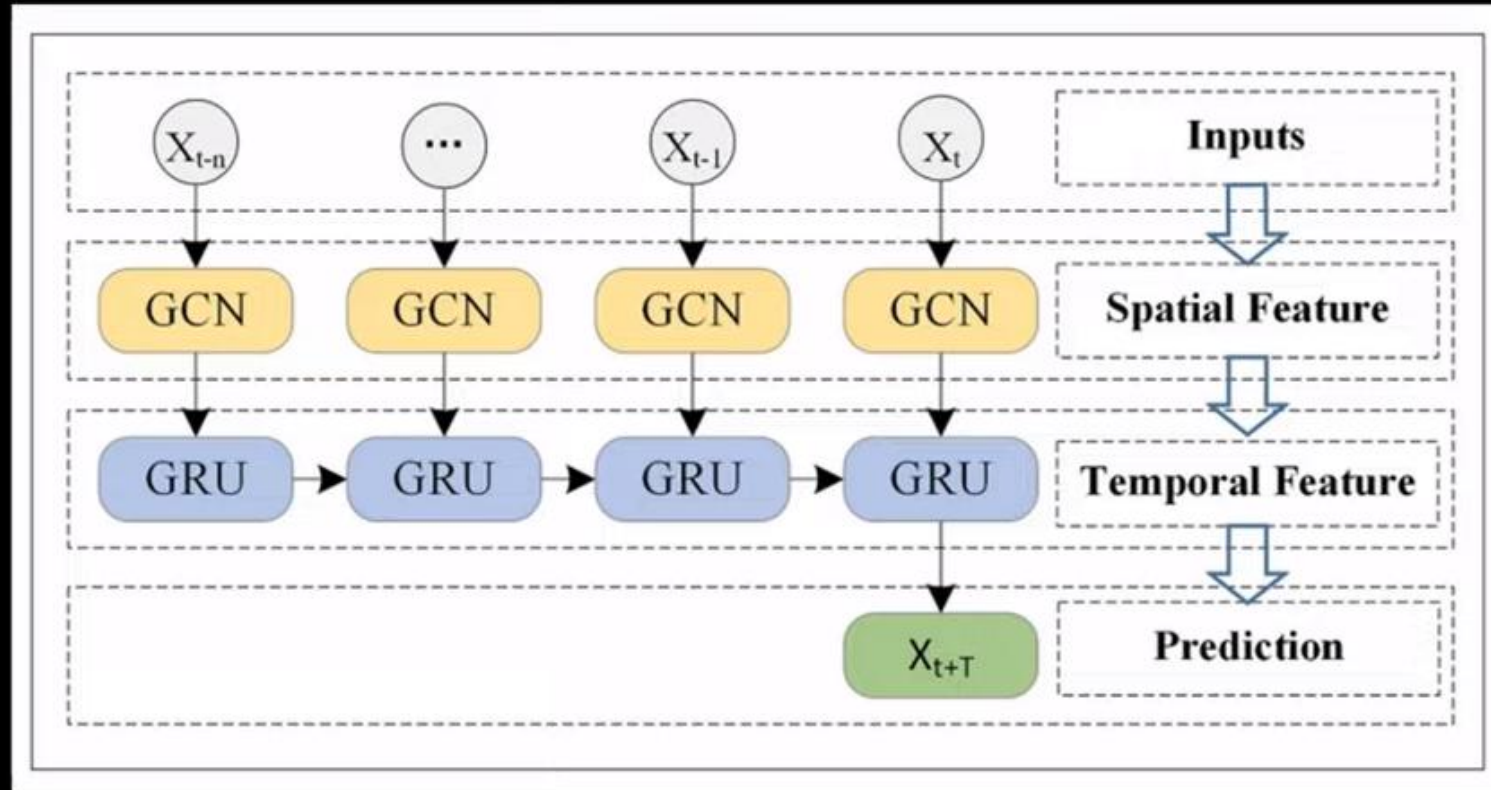
# Temporal Graph Neural Networks

再把LSTM之类的序列网络套进来



# Temporal Graph Neural Networks

核心就是考虑两个维度：时间，空间



T-GCN: A Temporal Graph Convolutional Network for Traffic Prediction, Zhao et al.