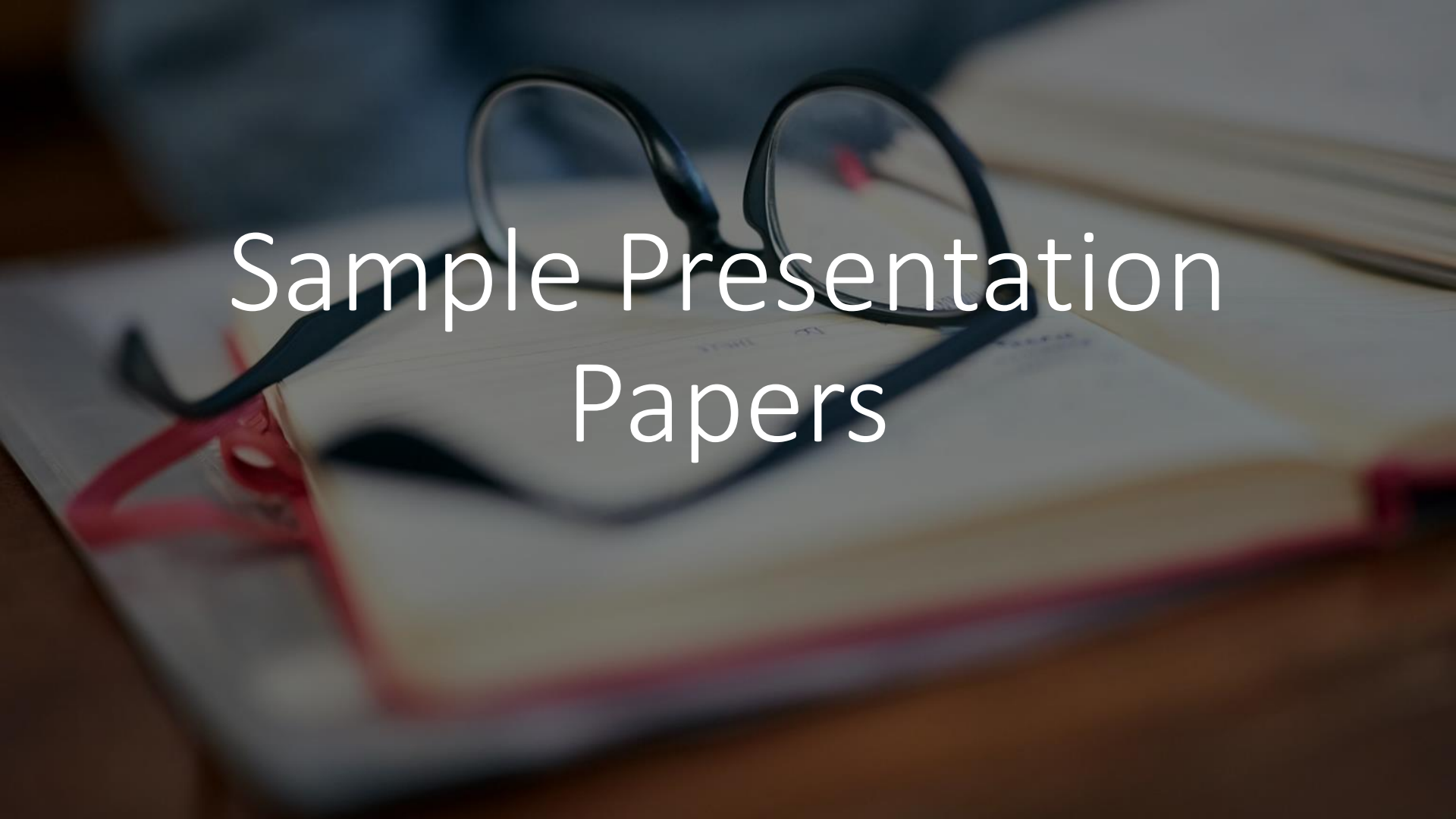

Sample Presentation Papers

Week 7: Learning ST Raster Data

- Predrnn: A recurrent neural network for spatiotemporal predictive learning, TPAMI
- Fine-grained urban flow prediction, WWW 2021
- Deep Multi-View Spatial-Temporal Network for Taxi Demand Prediction, AAAI 2018

Week 8: ST Graph Neural Networks and Applications

- Spatio-temporal graph convolutional networks: A deep learning framework for traffic forecasting, IJCAI 2018
- Diffusion convolutional recurrent neural network: Data-driven traffic forecasting, ICLR 2018
- Graph wavenet for deep spatial-temporal graph modeling, IJCAI 2019
- Connecting the dots: Multivariate time series forecasting with graph neural networks, KDD 2020
- Graph neural controlled differential equations for traffic forecasting, AAAI 2022
- Deciphering Spatio-Temporal Graph Forecasting: A Causal Lens and Treatment, NeurIPS 2023

Week 9: Advanced Topics in Human Mobility Analytics I

- Self-supervised learning (contrastive, generative)
  - When Do Contrastive Learning Signals Help Spatio-Temporal Graph Forecasting? SIGSPATIAL 2022
  - Contrastive Trajectory Similarity Learning with Dual-Feature Attention, ICDE 2023
  - Pre-training enhanced spatial-temporal graph neural network for multivariate time series forecasting, KDD 2022
- Transfer learning
  - What is the Human Mobility in a City? Transfer Mobility Knowledge Across Cities, WWW 2020
  - Transfer knowledge between Cities, KDD 2016
- Domain adaptation
  - Domain Adaptation for Time Series Forecasting via Attention Sharing, ICML 2022

Week 10: Advanced Topics in Human Mobility Analytics II

- Physics-Informed Neural Networks (PINNs)
  - STDEN: Towards Physics-Guided Neural Networks for Traffic Flow Prediction, AAAI 2022
  - Towards Physics-informed Deep Learning for Turbulent Flow Prediction, KDD 2019
- Reinforcement Learning (RL)
  - Spatial planning of urban communities via deep reinforcement learning, Nature Computational Science
  - A Deep Reinforcement Learning-Enabled Dynamic Redeployment System for Mobile Ambulances, Ubicomp 2019
  - Dynamic Bike Reposition: A Spatio-Temporal Reinforcement Learning Approach, KDD 2018
- Adversarial Training
  - A Non-Parametric Generative Model for Human Trajectories. IJCAI 2018

Week 11: LLM for STDMA

- UniTime: A Language-Empowered Unified Model for Cross-Domain Time Series Forecasting, WWW 2024
- AutoTimes: Autoregressive Time Series Forecasters via Large Language Models, arXiv 2024
- UrbanGPT: Spatio-Temporal Large Language Models, arXiv 2024
- Mobility-LLM: Learning Visiting Intentions and Travel Preference from Human Mobility Data with Large Language Models. NeurIPS 2024