Project topics for Deep Learning

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1 Projects

1. **Multivariate Time Series Anomaly Detection Using Deep Learning:** Consider an application environment with three groups of machines: S-1, S-2, and S-3, where S-1, S-2, and S-3 include 8, 9, and 11 machines, respectively. Each machine contains 38 sensors. A dataset is recorded over time from the given environment. The dataset includes 28 instances of multivariate time series data generated from 28 machines. Each multivariate time series is recorded from 38 sensors over time. The challenge is to propose a deep-learning model-based pipeline that can detect anomalies in all instances of multivariate time series.
   Click here for details

2. **Multi-Step Air Quality Forecasting Using Robust Deep Learning Model:** Given a dataset that records information related to air quality over time for four cities: B, G, S, and T. The challenge is to develop a robust deep-learning model for multi-step forecasting in multivariate time series data.
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3. **Missing value imputation and forecasting:** Given three air quality datasets: Air_Quality_1, Air_Quality_2, and Air_Quality_3. Develop a deep learning-based pipeline for imputing missing values and single-step forecasting in multivariate time series data. Each dataset presents unique challenges and characteristics.
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