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**Paper ID** : 55

**Paper Title** : AI-Based Subscriber Classification in Power Distribution Networks Using Load Profiles

**Bio :**

Gaye Tülgen Kale is pursuing a Master of Science in Software Engineering at Firat University, where she focuses on data science, machine learning, and artificial intelligence. Her professional interests include machine learning, deep learning, time series forecasting, computer vision, and large language models (LLMs). She has developed several data-driven and AI-based projects, including an energy forecasting system that predicts hourly electricity consumption using Prophet and XGBoost, an Oracle SQL-based subscriber segmentation model analyzing payment behaviors, and a natural language processing system that extracts relevant information from legal and banking correspondence. Additionally, she developed a YOLOv8-based computer vision system that reads serial numbers and brand information from flour sack images, significantly reducing manual inspection time. In her academic research, she published a study on subscriber classification based on electricity consumption profiles, where she compared 1D-CNN and ROCKET models on hourly consumption data from 25,476 subscribers and achieved the highest accuracy among tested models.