Title	Authors	Technique Used	Description	Advantages	Limitations
DeepLocalization: Landmark-based Self-Localization with Deep Neural Networks	Nico Engel, Stefan Hoermann, Markus Horn, Vasileios Belagiannis, Klaus Dietmayer	Deep Neural Network based Pose Regression	Regresses vehicle's translation and rotation from unordered/dynamic landmarks. Uses synthetic ground truth and is robust to environmental changes.	Handles dynamic environments, fast inference (~2ms), improved GPS localization, EKF compatible.	Requires initial GPS, specific dataset training, synthetic data may not generalize to real-world.
Support Aggregate Analytic Window Function over Large Data by Spilling	Xing Shi, Chao Wang	Disk-Spilling for Analytic Window Functions	Spilling algorithm to efficiently handle large window-based SQL functions like MIN/MAX.	Supports large-scale windows, reduces disk I/O, scalable, efficient page management.	Dependent on page structure, not optimal for highly dynamic queries.
Automated Crop Field Surveillance using Computer Vision	Tejas Atul Khare, Anuradha C. Phadke	YOLOv3 Object Detection for Wildlife Surveillance	Detects animals in crop fields using YOLOv3 and activates speakers to deter them.	Reduces manual labor, cost-effective, uses existing cameras.	Needs retraining for local fauna, affected by occlusion and lighting.
Unit Commitment on the Cloud	Mushfiqur R. Sarker, Jianhui Wang	Cloud Computing for Unit Commitment Optimization	Uses cloud platforms like EC2 to solve power system Unit Commitment problems.	Scalable compute, lower infrastructure cost, flexible resource use.	Security risks, cloud performance variability, data confidentiality concerns.