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| S.No. | Application Domain | Complex Problem Identified | Justification |
| 1. | Healthcare | Data interoperability among systems | Different systems use varied formats, complicating data sharing and integration. |
| 2. | Finance | Fraud detection in financial transactions | Increasing sophistication of fraudulent schemes requires advanced algorithms for detection. |
| 3. | Education | Personalized learning experiences | Diverse learning needs and styles demand adaptive learning technologies. |
| 4. | |  | | --- | |  |  |  | | --- | | Transportation | | Real-time traffic management | Dynamic traffic patterns need real-time adjustments for effective management. |
| 5. | Agriculture | Precision farming and resource management | Requires integration of sensor data and predictive analytics to optimize resource use. |
| 6. | Energy | Grid stability and energy storage | Fluctuations in renewable energy sources necessitate efficient storage and management solutions. |
| 7. | Retail | Supply chain optimization | Complex supply chains need advanced algorithms to balance inventory and reduce costs. |