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(57) Abstract :
 A federated learning-enabled secure medical data aggregation platform (100) is disclosed, comprising a Node Manager (102), Local Training Unit (104), Secure Communication Layer (106), Aggregation Server (108), Fault Detection Unit (110), and Model Validation and Deployment Unit (112). The platform facilitates privacy-preserving, secure, and efficient training of healthcare models across decentralized institutions, ensuring encrypted communication, adversarial node detection, and robust global model construction.

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