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(57) Abstract :

The invention relates to a Robotic Model for Autonomous Library Book Management comprising a mobile robotic platform (101), navigation and obstacle detection system (102), computer vision and RFID/barcode recognition unit (103), robotic manipulator with adaptive gripper (104), digital catalog integration module (105), and user interface and retrieval system (106). The system autonomously performs book shelving, retrieval, and inventory auditing with high accuracy. The invention reduces manual effort, enhances catalog synchronization, and ensures safe book handling, offering an efficient and user-friendly library management solution.

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