

BANK TRANSACTION SCANNER

Group 3

MEET TEAM



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BACKGROUND

- Banking institutions process thousands of transactions daily.
- Manual handling of bank transaction data is inefficient and error-prone.
- Automation through OCR and AI can streamline this process.

PROBLEM STATEMENT

- OCR data extraction still requires manual correction and template setup.
- Preprocessing methods lack adaptability for different backgrounds and formats.
- Difficulty in automatically identifying transaction fields.
- Storage limitations for saving processed images.

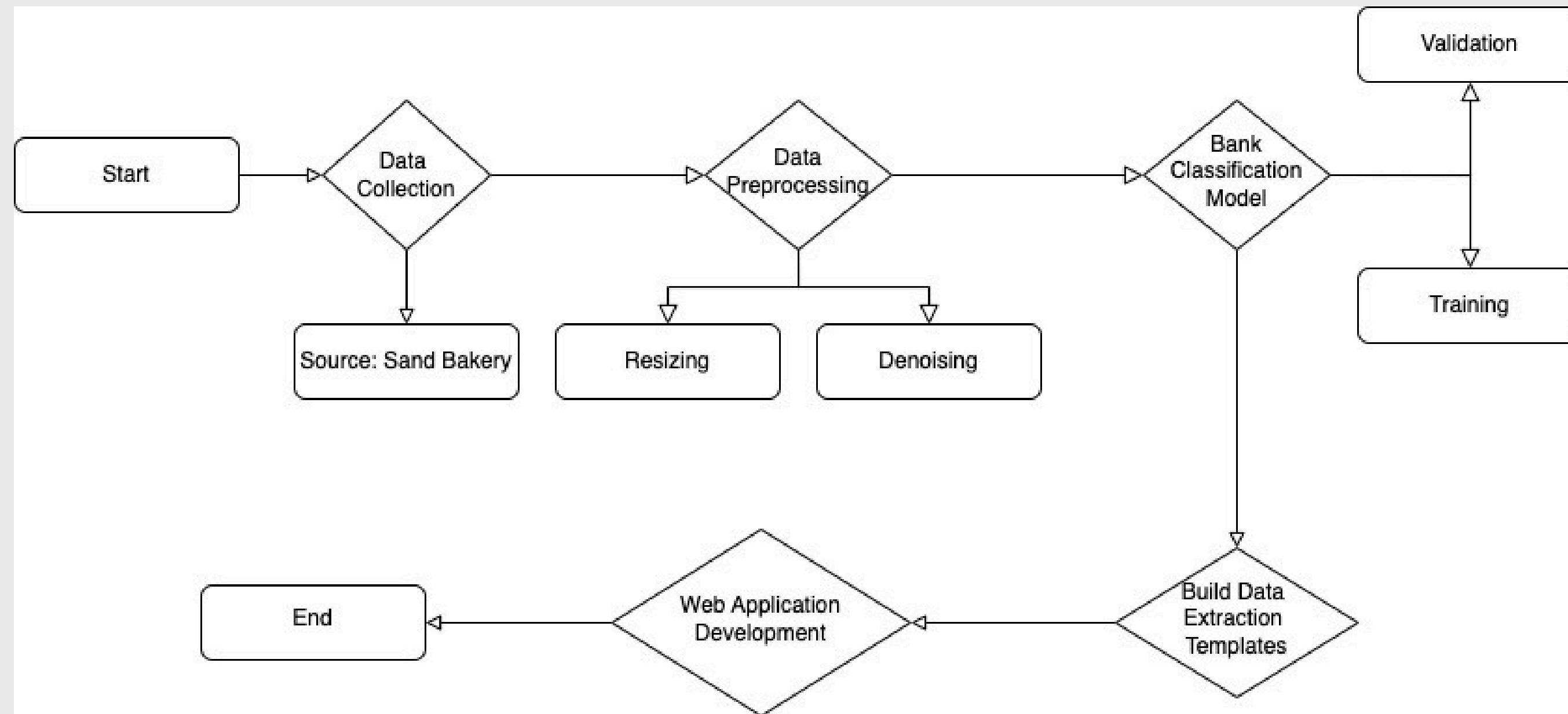


OBJECT

- Automate extraction of key information (transaction ID, amount, currency, date).
- Present results through a user-friendly web application.
- Enhance image preprocessing to support OCR.
- Validate and store extracted data.
- Classify bank type automatically.

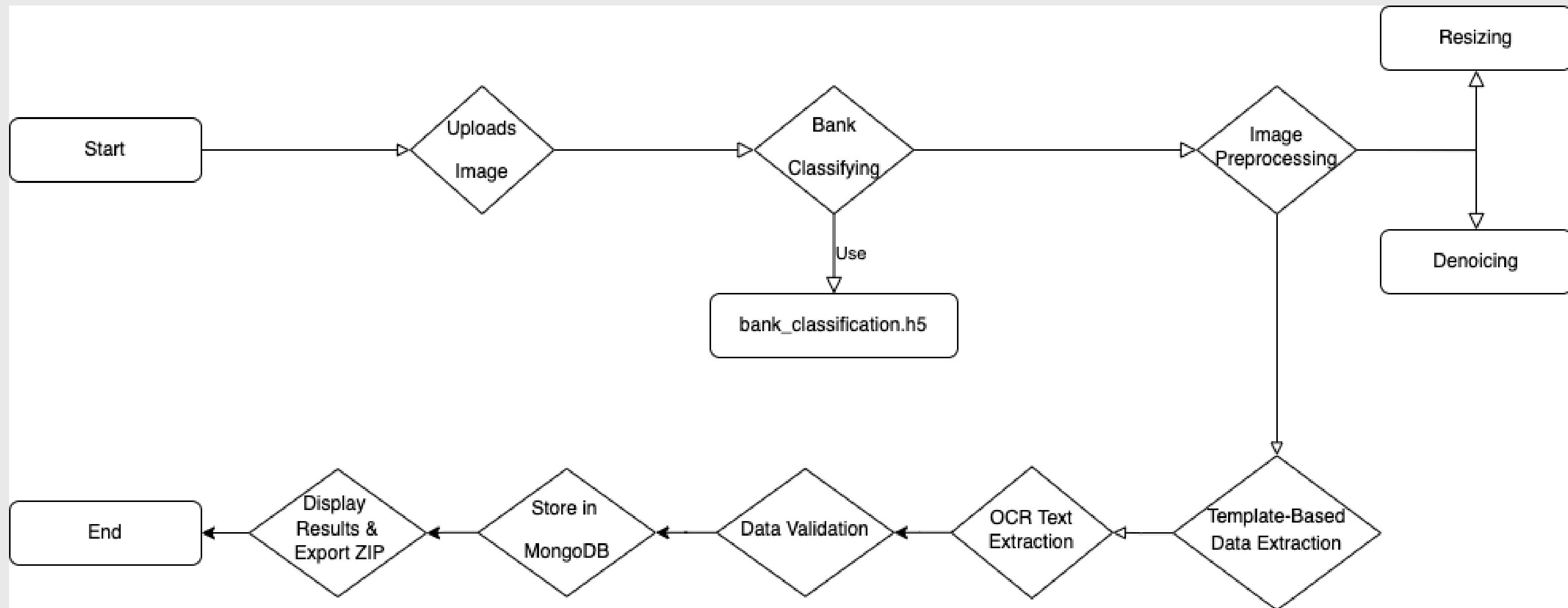
FLOWCHART

RESEARCH FLOWCHART



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SYSTEM WORKFLOW



PREPROCESSING TECHNIQUE



PREPROCESSING TECHNIQUE



TECHNOLOGIES USED

- Python (OCR, ML model, data extraction)
- MongoDB (Data storage)
- FastAPI (Backend API)
- Next.js (Frontend UI)
- TensorFlow/Keras (.h5 model for classification)

RESULT

- Tested on ABA and ACLEDA bank statements in Khmer and English.
- Extracted transaction ID, amount, currency, and date.
- Preprocessing steps improved OCR clarity and precision.
- All transaction data stored in MongoDB.
- Simple web interface (Home, History, About Us).
- Data download available for user review.

FUTURE WORK

- Apply new OCR methods with field-level cropping.
- Add backend support for storing images.
- Enhance preprocessing pipeline for greater clarity.
- Implement automatic learning-based template generation.

CONCLUSION

The Bank Transaction Scanner successfully automates classification, extraction, and presentation of transaction data from two major banks. It demonstrates solid preprocessing improvements, OCR integration, and validation workflows. With further development, it can evolve into a more intelligent, scalable, and efficient tool for financial document automation.



THANK YOU