WAATER

Qiraa'a Recognition and Error Detection using Deep learning

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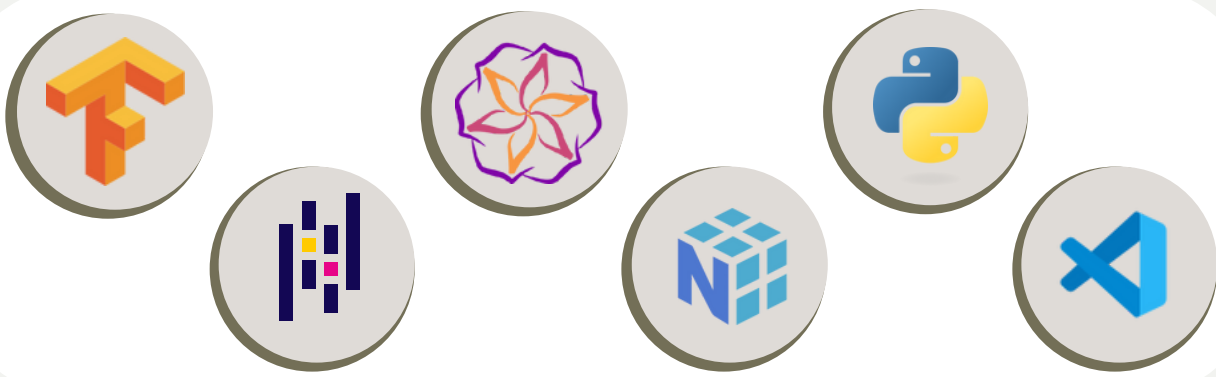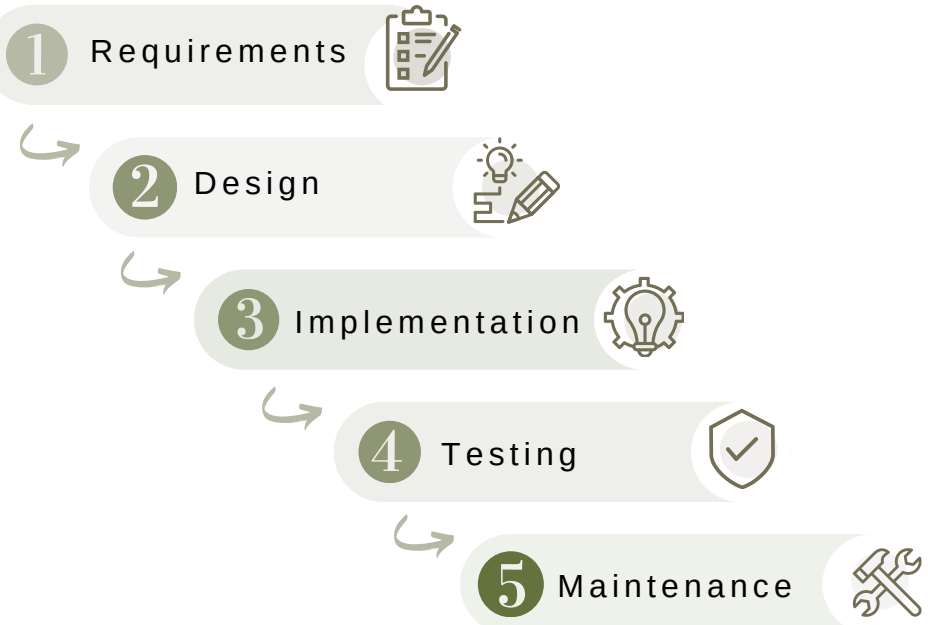
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ABSTRACT

Our project tackles the challenge of different recitation styles by creating an app that identifies them and specific verses from audio files. We've used advanced technology, specifically CNN, to train our model.

OBJECTIVES

- Preserving Quranic Recitations
- AI-Powered Enhancement
- Inclusivity for All Muslims
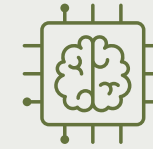
TOOLS

DATASET

1. DATA COLLECTION
2. DATA PREPERATION
3. DATA STRUCTIORING

METHODOLOGY

The waterfall model chosen for this project.

1. Requirements
2. Design
3. Implementation
4. Testing
5. Maintenance

RESULT

Accuracy of models using CNN

- 83.42% — Qiraa'a Recognitoin model
- 97.49% — Verse classifier model
- 80.00% — Hafs model
- 65.64% — Warsh model
- 99.49% — Aldori model
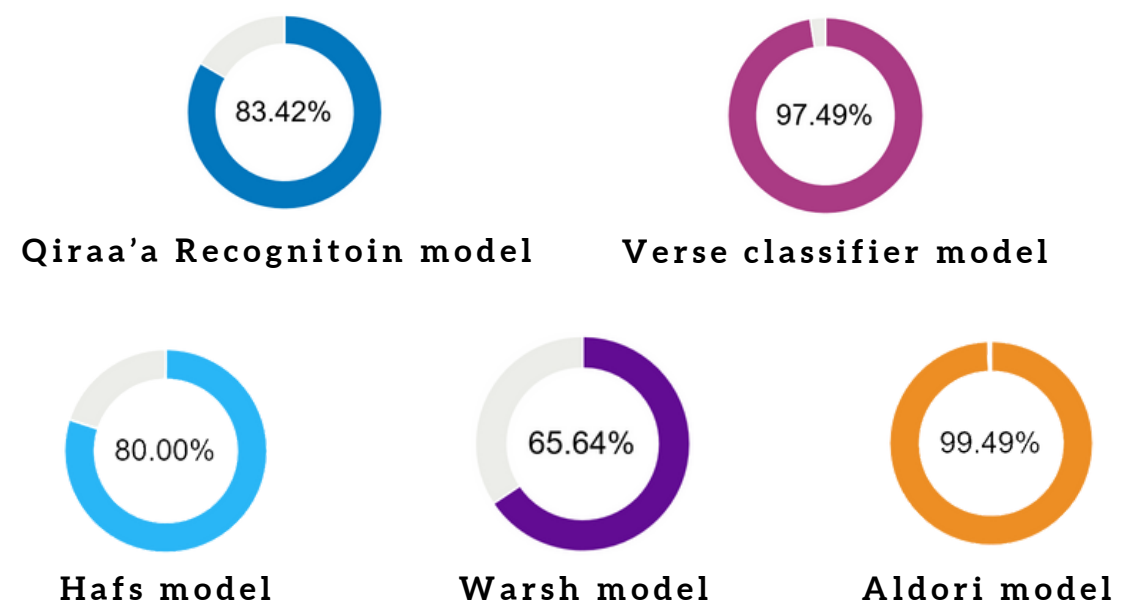
PROTOTYPE

FUTURE WORK

1. Personalized Voice Generation
2. Practice Plans and Progress Tracking
3. Tajweed Correction
4. Record Review
5. Recitations Community
6. Collaboration with Scholars

CONCLUSION

This project showed us how powerful new technolgy can be in recognizing recitation styles and classifying verses. We've set the stage for even more progress in the future. We can make our system even better and find new ways to use it.