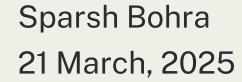
Heritage Rhythm

SAFEGUARDING HERITAGE, STRENGTHENING MINDS.





Together, we can bridge the gap in technology access and opportunity.



THE PROBLEM

- Cultural Memory Loss & Mental Health Decline
 - Dementia cases rising globally » 153M by 2050 (WHO, 2023)
 - Cultural identity loss → depression & faster cognitive decline (NIA, 2023)
 - Dance, music, movement » memory recall & improved social connection



THE SOLUTION

Rhythm Heritage as a Mental Health & Safety Tool

- Cultural Dance as Memory Therapy » Retain deep-seated memories
- V Prevent Cultural Amnesia » AI preserves fading traditions
- Intergenerational Engagement » Elders + youth bridging loneliness
- ✓ Fine-Tuned AI » Classify dances, keep cultural knowledge accessible



TECHNICAL PLAN

Step	Task	Tools
1	Elder Uploads a Dance submit videos + metadata	Django/Flask + S3
2	Process Video (3D Data) br>Extract motion joints	VIBE
3	Generate Embeddings Convert motion to fixed-size vectors	MotionBERT
4	Fine-Tune br>Train a dance classifier	MotionBERT /
		Transformer
5	User Selects Dance Chooses from library	Frontend UI + API
6	User Practices Records dance attempt	Frontend Camera
7	Process User Dance String of the string of the	ML Inference
8	Compare & Score dance	Cosine API
9	Feedback & Recommendations similar dances	Fine-Tuned Model API



ML & IMPLEMENTATION DETAILS

- Model Accuracy Goal: ~85–90% style classification
- Data: Curated dance videos from diverse cultures
- Preprocessing: VIBE → 3D skeleton
- Embedding: MotionBERT (162MB base model)
- Classification: Fine-tuned model on dance style dataset
- Cosine Similarity: Real-time user feedback (score out of 1.0)

Current Status:

- Backend pipeline works (VIBE + MotionBERT + SQLite).
- Fine-tuning not complete due to time constraints.



DEMO



FUTURE SCOPE

- AI Dance Style Classification Fine-tune models to classify cultural dance styles with high accuracy.
- Heritage Chatbot AI assistant to provide historical & cultural context on dances.
- Fine-Tuned MotionBERT Train a specialized model for better dance motion recognition.
- Group Dance Recognition Expand AI to analyze multiple dancers performing together.

Rhythm

- Personalized AI Feedback Improve real-time movement correction and learning suggestions.
- Crowdsourced Dance Archive Allow users to contribute and expand the dance database.

 Heritage

Thank you!

GITHUB: https://github.com/SparshBohra/visualai

