

NEPAI

TEAM: ACCESS CODE



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Real-Time Nepali Braille to Nepali Unicode Text Converter

Pokhara, Gandaki Province, Nepal

“Nothing about us, without us.”

Transforming handwritten Braille into readable Nepali text in seconds—bridging the gap for teachers, parents, and institutions.

1. PROBLEM <ul style="list-style-type: none">Sighted educators and parents cannot read Braille, excluding learners with visual impairments from direct feedback and opportunities.Manual conversion is slow, expensive, and compromises privacy, leaving dozens of learners dependent on single resource teachers.No accessible digital OCR tool exists for Nepali Braille, locking over 145,000 visually impaired individuals out of digital spaces.	2. SOLUTION <ul style="list-style-type: none">Mobile app capturing handwritten Nepali Braille via phone camera.Converts dots to Nepali Unicode text using YOLO detection, grid mapping, and Gemini AI.Provides teachers and parents instant, private, near real-time translation.	3. UNIQUE VALUE PROP <ul style="list-style-type: none">First digital OCR tool built specifically for Nepali Braille.It works on ordinary Android phones already used by families and schools.It makes the writing of people with visual impairments readable to the sighted world, not the other way around.
4. CUSTOMER SEGMENTS <ul style="list-style-type: none">Learners with visual impairments and resource educators in special and inclusive classrooms.Families of people with visual impairments who cannot read or write Braille.Schools, banks, government offices, and NGOs legally processing Braille submissions.	5. CHANNELS <ul style="list-style-type: none">Partnerships with schools for the blind, inclusive government schools, and provincial education offices.Outreach through NAWB, NFDN, Ministry of Education networks, and teacher training programs.Social media, bilingual website, Nepali media, workshops, and community FM radio.	6. KEY METRICS <ul style="list-style-type: none">Dot detection accuracy on the Nepali Braille dataset.Character-level conversion accuracy from Braille to Unicode text.Number of schools, families, and institutions actively using the app.
7. REVENUE STREAMS <ul style="list-style-type: none">School and institution subscriptions.Family subscriptions priced for affordability in Nepal.Donor, NGO, and government funding for expansion and deployment.	8. UNFAIR ADVANTAGE <ul style="list-style-type: none">Strong community trust through lived experience and disability-sector relationships.Proprietary Nepali Braille dataset built through direct access and field relationships.A team combining ML, mobile, UI/UX, and institutional expertise.	9. TRACTION & ROADMAP <ul style="list-style-type: none">Prototype is already built and pre-deployment.Core pipeline is in place, with ongoing work on dataset growth and accuracy improvement.Next steps include pilot rollout, institutional partnerships, and expansion toward national and regional use.

145,000+ People with Visual Impairments in Nepal.	1st Nepali Braille OCR	Seconds Braille-to-Text Conversion	24/7 Accessible via Mobile App
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WHY NOW?

- Learners with visual impairments write fluently, but teachers and parents still cannot read their work.
- Scarce transcribers remain concentrated in Kathmandu, leaving rural classrooms without timely feedback.
- As education moves online, Nepali Braille faces total exclusion without a digital transition tool.

OUR STRATEGIC MISSION

To build Nepal's most trusted Braille accessibility ecosystem by combining smart technology with community trust, so that blind people's writing becomes instantly readable, feedback becomes immediate, and inclusive education becomes practical in every classroom.



AMCHAM
The American Chamber of Commerce in Nepal

