

MEET THE TEAM



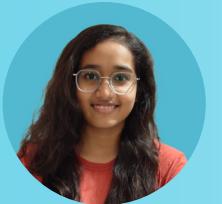
RAVI TRIVEDI
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HET VEDANI
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Feel to Read : A smart Braille companion

“Empowering Learning Through Touch.”

The Arduino-based BrailleSmart Reader is an assistive system designed to convert text into real-time tactile Braille output for visually impaired users. Using embedded C programming, the Arduino processes characters and activates push-pull solenoids to form Braille dots based on electromagnetic principles. A protected driver circuit and regulated power supply ensure safe and reliable operation. The solution is low-cost, compact, and suitable for educational institutions making Braille accessibility more practical and scalable.



01. WHY ARE WE DOING THIS PROJECT? (PROJECT RATIONALE)

Visually impaired students face major difficulty accessing printed learning materials. Braille books are expensive, bulky, and slow to produce.

Our project provides a low-cost, real-time solution that converts normal text into tactile Braille, enabling independent learning and improved accessibility.

02. WHICH PROBLEM DOES IT ADDRESS?

Many visually impaired learners cannot read printed text without assistance. Existing Braille materials require long preparation time and are not always available.

This creates dependency on others and limits educational opportunities.

Our system helps by instantly converting digital text into physical Braille dots.

03. WHAT ARE THE ALTERNATE SOLUTIONS OUT THERE?

Current alternatives include printed Braille textbooks, refreshable Braille displays, and audio-based screen readers. While effective, these solutions are often costly, complex, and not affordable for many institutions or individuals. Some systems are bulky and require specialized infrastructure.

04. WHAT MAKES OUR PROJECT STAND OUT FROM THE REST?

THIS IS YOUR UNIQUENESS OR INNOVATION.

Our project is unique because it is affordable, simple, and suitable for education.

It generates Braille in real time using easily available components, allows independent dot control, demonstrates embedded systems and electromagnetism, and can be deployed in schools and colleges at much lower cost.