AI - Powered Handwriting Learning for infants and People with learning disabilities

Innovative Learning with Real-Time Feedback and Interactive Support

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Project Overview

It is an amazing and creative idea to teach toddlers and People with learning disabilities to write by using a handwriting recognition model! An AI-powered handwriting model can improve the learning process by offering real-time feedback, interactive learning experiences, and individualized advice, in contrast to traditional teaching methods that involve manual tracing and instruction.

Learning has to be fun.

Methods / Tools / Resources

Project Workflow

Start ⇒ Data Preprocessing

Model Training ⇒

Naives Bayes - 77%,
Non-Naives Bayes - 93%
KNN -

Model Testing ⇒

Naives Bayes - 83%
Non-Naives Bayes - 99%
KNN - 100%

Naive Bayes: Looks at clues and characteristics independently

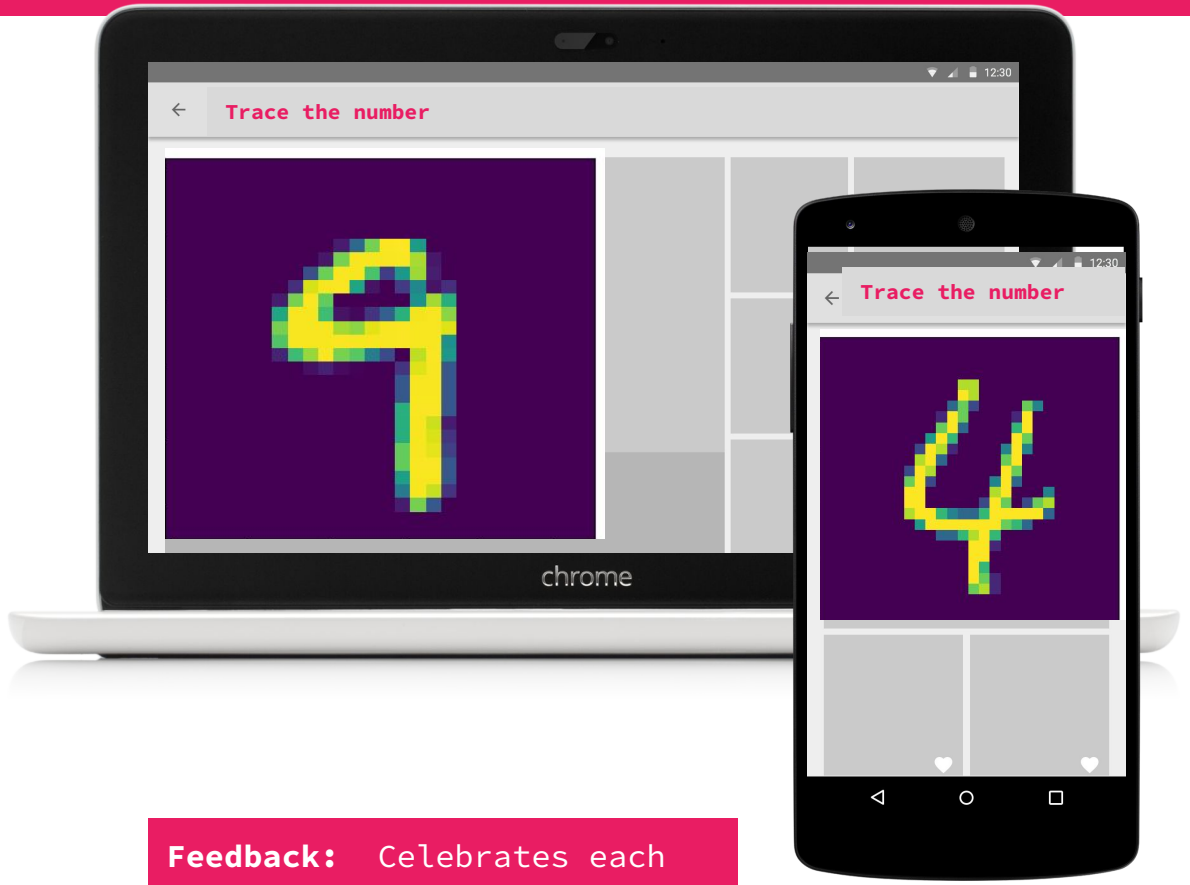
Non Naive Bayes: Looks at clues and characteristics wholistically

AI- Handwriting Learning - Key features

The Model detects various numbers and Assists infants in drawing shapes and numbers by tracing outlines

Interactive: Engages children with simple prompts like "Write the number 9!"

Writing tool: Uses a tablet/stylus for a hands-on experience. And also possible to use the finger



Feedback: Celebrates each success with visual/audio

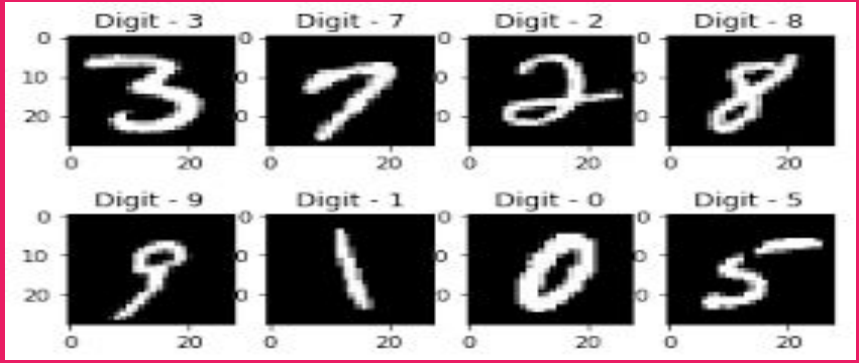
Performance Tracking

Records progress and provides caregivers with actionable insights. (Achieving Badges)

Targeted Practice

Identifies strengths and areas for improvement

Benefits



Early Skill Development

Helps develop motor skills and early literacy

Motivation through Play

Makes learning feel like a fun activity rather than a lesson

Adaptable to Individual Needs

Provides personalized feedback, ensuring children learn at their own pace

Parental & Teacher Involvement

Real-time insights make it easy to support learning

Motivation through Play

Makes learning feel like a fun activity rather than a lesson

Scalable Solution

Adaptable for different languages, learning stages, and environments

AI- Handwriting Learning

Using AI to teach handwriting can provide infants with a structured, interactive, and enjoyable learning experience.

The model offers instant corrections and positive reinforcement, crucial for skill-building in early development.

The adaptive model adjusts to each child's learning pace and provides insights, helping parents and teachers support their child’s progress effectively.