Introduction

Learning fast typing is essential in almost any job field especially tech companies that uses programming for various applications and for that making an app in python language for fast type learners with simple design will ensureas the productivity for the learners, the app for accurate calculations to show the WPM rate and accuracy with an result prediction based on the last session.

What problem the app solves

-Successful projects for example applications and web development need a certain period of time to be developed properly.

-a simple structure to make a project primely includes coding and to achieve it within a short period of time; the developer should have fast and accurate hands unless he wants an overburden

-Learners have to know their futuristic results for skills improvement , To achieve this idea a prediction tool will be needed using LinearRegression library specifically sklearn.linear_model

Dataset Description

- **The app uses a dictionary data; specifically verb, noun, adverb, adjective was put in a file named english_text.txt in form of short sentences.**
- **It uses an experience points to show the progress of the user, stored in a variable will be stored for every session in file named XP_FILE.**

- **Typing levels is also included: beginner, intermediate, advanced using sklearn.naighbor each will increase the xp of the user:**

  beginner (xp*1.0), intermediate (xp*1.5), advanced (xp*2)

Methods & Tools:

In simple terms It contains a simple system, the AI model will look for a given words characterized as 4 arrays:

[verb , noun , adverb , adjective]

Then it will take these words and arrange them to form a complete sentence.

- **Main used libraries:**
  - **os: to ensure if the file exists before any operation**
  - **numbpy: to convert lists into arrays (machine learning works only with linear values)**
  - **sklearn.neighbors: classifies user skill into beginner/intermediate/advanced.**
  - **sklearn.linear_model: learns patterns in past performance to predict next test.**
  - **time: calculates how long the user takes to type.**
  - **Random: generates random sentences.**
  - **csv: stores typing session history.**
  - **json: stores XP and retrieves it later.**
  - **difflib: measures text similarity for accuracy scoring.**

- **Main functions:**

  -random.choice().

  -generate_sentence().

  -auto_generate_text_file().

  -build _target_text().

Results:

During execution, the typing system provided an AI-generated mission, measured the user's typing performance, updated the XP/level system, and predicted future performance. The result will show in the format below:

- **Mission information: skill level, assigned difficuly, sentences**
- **User performance: time taken, WPM, accuracy, skill class**
- **XP and level progress: xp earned this session and total xp**
- **Next-session predictions: predicted WPM/Accuracy**

Conclusion:

The app uses Python and machine learning to generate random English sentences, measure typing accuracy and speed, and track XP. It compares the current session with previous ones, adjusts difficulty based on skill, and predicts the user's future performance.