# Data Dictionary

* **Id**: Unique identifier for each keystroke event.
* **StartTime & EndTime**: Timestamps of when a key was pressed and released.
* **KeyPressed**: The individual key that was pressed.
* **FullWord**: The accumulated word being typed.
* **FlightTime**: Time between consecutive key presses.
* **KeyHoldTime**: Duration a key was held down.
* **DeviceId**: Identifier for the device.
* **CreatedAt & ModifiedAt**: Timestamps of when the data entry was created or modified.

# Using HMM to Infer Hidden Variables

A Hidden Markov Model (HMM) can be used to uncover hidden cognitive states based on observed keystroke patterns. Here’s what we can do:

Observed Variables (What we see in the data):

***FlightTime*** (Time between key presses)

***KeyHoldTime*** (Duration a key is held)

***KeyPressed*** (Can be encoded as numerical values)

***Hidden Variables (What we want to infer):***

* Typing states such as "Fluent Typing", "Paused", "Error Correction", "Hesitation".
* Typing behaviour.