

# PoGoGymBattleSimulator Instruction

Version: 1.0

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Package Download Link: <https://drive.google.com/open?id=0B4ketT7DHs89MFljNUQxQzEyRzg>

## Simplest usage:

1. Double click the **"PoGoGymBattleSimulator.exe"**. The application will read input matchups from a csv-format file named **"PoGoGymSim\_Default\_Input.csv"**, run each valid matchup and export the battle results to another csv-format file named **"PoGoGymSim\_Default\_Output.csv"**.
2. To understand the required format of user input, see [Input Format](#) part.

## Advance usage:

Pass additional parameters to the application using command prompt.

### 1. Optional parameters:

Parameter	Description
/d	Export each matchup with its detailed battle log. In this case, the default output file will be in txt-format instead of in csv-format.
/i [filename]	Redirect the input file to [filename]. The input file must be in csv-format for it to work.
/o [filename]	Redirect the output file to [filename].

### 2. Examples

(The directory need not to be the same)

- 1) To run matchups from a file **"my\_input.csv"**, the command is:

```
c:\Users\biowe\Desktop\PoGoGymSim>PoGoGymBattleSimulator.exe /i my_input.csv
```

- 2) To run matchups from a file **"my\_input.csv"** and output the result to **"my\_output.csv"**, the command is:

```
c:\Users\biowe\Desktop\PoGoGymSim>PoGoGymBattleSimulator.exe /i my_input.csv /o my_output.csv
```

- 3) To see the detailed battle log of each matchup from input file **"my\_input.csv"**, the command is:

```
c:\Users\biowe\Desktop\PoGoGymSim>PoGoGymBattleSimulator.exe /i my_input.csv /d
```

## Input Format:

### 1. CSV format only

The application can only read input matchup from a csv-format file. It may or may not have headers (the application will skip headers and invalid data rows automatically).

### 2. List of Input Parameters

The list of parameters of an input matchup can be found in “**PoGoGymSim\_Default\_Input.csv**” as well as “**PoGoGymSim\_Default\_Output.csv**”.

### 3. Attacker Strategy code:

For attackers, strategy has two parts: Dodge Strategy and Special Attack Strategy.

#### 1) Dodge Strategy:

Code	Name	Description
n	No Dodging	Will not dodge any attacks of the enemy.
d	Dodge Specials Only	If an enemy's special attack is incoming, and the attacker is not cooling down, it'll fit in as many as attacks (special attack is given priority) before the damage window closes, and then dodge.
a	Dodge All	Same as Dodge Specials Only, except that the quick attacks of enemy will also be dodged if possible.

#### 2) Special Attack Strategy:

Code	Name	Description
0	Specials Spam	If the energy requirement is fulfilled, use charge attack right away. It'll override the dodge strategy.
1	Specials after Dodging	After dodging (if the dodge strategy is not No Dodging) an enemy's attack (quick or charge), and the energy requirement is fulfilled, use charge attack right away.
2	Specials after Specials	After dodging (if the dodge strategy is not No Dodging) an enemy's charge attack, and the energy requirement is fulfilled, use charge attack right away.
3	Specials Safe	Priority will be given the dodge strategy; that is, it'll only use Specials when it is guaranteed not to be hit by enemy's special attack when adopting Dodge Specials Only, or any of enemy's attacks when adopting Dodge All. In the latter case, it might never use special attack if the its duration is too long.
4	Quicks Only	Will not use charge attack.

And the final code is just the combination of the two. For example, “n0” is “No Dodging and use Special Attacks as soon as possible” for maximum DPS, “a3” is “Dodge ALL and use Specials only when safe” for high KD.

#### 4. Defender Strategy Code

For defenders, the strategy code always start with 'd', and followed by either '1', '2', or '3'.

Code	Name	Description
1	Expected	Additional cool down = 2000ms; if the energy is enough, use one more quick attack and then one charge attack.
2	Lucky Defender	Additional cool down = 2000ms; if the energy is enough, use charge attack right away.
3	Random	Addition cool down is uniformly distributed in [1600, 2400] ms; if the energy is enough, there's a 50% chance to use charge attack.

#### 5. List of Available Pokémon/Moves:

All data resources are in the folder "**PoGoData**". You can check all the available Pokémon/Moves with their appropriate names in the corresponding file. Do not modify the name of the folder or the name of any file in it, otherwise the program won't be able to load the data.

You could also add/modify some customized Pokémon/Moves as you like.

#### Output Interpretation:

Only the following metrics will be concerned in the scope of this application:

Metric	Description
[Time]	The time of the first battle.
[Time_to_win]	If the attacker wins the first battle, this will be the same as [Time]; otherwise, another identical attacker will be sent into the gym to continue the fight, and so on, until the defender faints. The total time is then [Time_to_win].
[KD_first]	The kill-death ratio (Defender % HP Lost / Attacker % HP Lost) of the first battle.
[KD_final]	If the attacker loses the first battle, this will be the same as [KD_first]; otherwise, another identical defender will be sent into the gym to initiate another battle, and so on, until this attacker faints. The overall KD is then [KD_final]. Normally, this should not be too different from [KD_first].
[Prestige]	The prestige gained of the first battle.