

# 7Next Machine Learning Challenge

Hello! Here at 7Next, machine learning engineers solve all sorts of challenging problems using machine learning algorithms. As part of our interview process, please take **no more than 2 hours** to prototype a solution to the following problem:

Using the PokeAPI (<https://pokeapi.co/>), design an algorithm that determines the “type” of a Pokemon (i.e.: grass, electric, fire). Your algorithm will be expected to output a predicted type based on an input directly from the API, shown below:

```
import requests
import my_data_processor
import my_pokemon_algo

# Get the data from PokeAPI
resp = requests.get("https://pokeapi.co/api/v2/pokemon/pikachu").json()

# (Optionally) process the results
pokemon_data = my_data_processor.process(resp)

# Predict the type of a Pokemon
poke_type = my_pokemon_algo.predict(pokemon)

# Example output -> "electric"
print(poke_type)
```

Note that many Pokemon have multiple classes; in that scenario, **use the first “type” returned from the API.**

Please use Python as your language. You’re welcome to use any Python libraries you want, as long as they are freely available to download using `pip`. Using popular ML libraries such as `scikit-learn`, `tensorflow`, or `pytorch` is encouraged – we are not looking for a custom implementation of an algorithm. Instead, we're interested in how you approach the dataset, model considerations, and how you define success.

Once you’ve completed the challenge, please upload your code to a public git repository and email the link to [kyle.dalal@7-11.com](mailto:kyle.dalal@7-11.com). Once we get the code, we’ll review it and schedule an interview to discuss your solution and problems you encountered on the way.

Finally, thanks for taking the time to complete this. We've seen that a live coding interview is not representative of day-to-day work; we hope this challenge is a chance to showcase your problem-solving skills without the pressure of an interviewer looking over your shoulder. Good luck, and have fun!