Class Exercise:

Files v2

You are working as a data scientist for a fictional cybersecurity company. As part of your job, you need to analyze log files generated by various network devices. Each log file contains multiple entries, and each entry follows a specific format:

**Timestamp | Source IP | Destination IP | Protocol | Status**

Your task is to create a Python class called **"LogAnalyzer"** that performs the following operations:

1. Read the log file and count the total number of entries.
2. Find the percentage of successful connections (entries with a "Status" of "Success") out of the total number of entries.
3. Determine the unique source IP addresses present in the log file.
4. Calculate the average number of entries per source IP address.
5. Write the analysis results to a new file named "log\_analysis.txt".

class LogAnalyzer:

    def \_\_init\_\_(self, log\_file\_path):

# Your code here

    def analyze\_log\_file(self):

# Your code here

# Usage example:

analyzer = LogAnalyzer('log\_file.txt')

analyzer.analyze\_log\_file()

Expected output:

Total Entries: 1000

Percentage of Successful Connections: 75.20%

Unique Source IP Addresses: 192.168.1.100, 10.0.0.5, 172.16.0.2, ...

Average Entries per Source IP: 50.00