Work Sample

I worked on and completed the Google Cybersecurity Certificate in the spring of 2025. During the certification process, I completed an activity involving a scenario from a healthcare company. I was tasked with updating a file containing the IP addresses of employees who had access to restricted content. The company provided a remove list, containing IP addresses that needed to be removed from the original file. I created a Python algorithm to check whether the allow list contained any IP addresses on the remove list. If any of the IP addresses matched, they were removed from the allow list:

```
# Assign `import_file` to the name of the file

import_file = "allow_list.txt"

# Assign `remove_list` to a list of IP addresses that are no longer allowed to
access restricted information.

remove_list = ["192.168.97.225", "192.168.158.170", "192.168.201.40",
"192.168.58.57"]

# Build `with` statement to read in the initial contents of the file

with open(import_file, "r") as file:

    # Use `.read()` to read the imported file and store it in a variable named
`ip_addresses`

    ip_addresses = file.read()

# Use `.split()` to convert `ip_addresses` from a string to a list

ip_addresses = ip_addresses.split()

# Build iterative statement
# Name loop variable `element`
# Loop through `ip_addresses`

for element in ip_addresses:

  # Build conditional statement
  # If current element is in `remove_list`,

    if element in remove_list:

        # then current element should be removed from `ip_addresses`

        ip_addresses.remove(element)
```

```
# Convert `ip_addresses` back to a string so that it can be written into the
text file

ip_addresses = " ".join(ip_addresses)

# Build `with` statement to rewrite the original file

with open(import_file, "w") as file:

  # Rewrite the file, replacing its contents with `ip_addresses`

  file.write(ip_addresses)
```