Part 2: Functional Understanding

1. Describe how your automated solution can be monitored and maintained over time to ensure its continuous operation.

> **Backup and Version Control**: Keep a backup of the Excel file and all downloaded CVs, ensuring that if anything goes wrong, the process can be restarted from the last known good state.

> **Maintenance for LinkedIn Changes**: Since LinkedIn is a dynamic platform and the HTML structure might change, periodic checks should be performed to ensure the selectors are still valid.

2. Explain any considerations that may disrupt the proper functioning of the automation that you have taken into account when developing this automation and how you would prevent them.

> **LinkedIn Layout Changes**: If LinkedIn updates its layout, it could change the positions of the name, current position, or "Save to PDF" button. To prevent this we can implement a monitoring system that alerts you when extraction fails

> **Profile Privacy Settings**: Not all LinkedIn profiles are publicly accessible, and some profiles may not allow CV downloads. This could cause the automation to fail or not gather data for some profiles. To prevent this, we need to ensure the script gracefully handles missing data by setting conditions that allow it to skip inaccessible profiles and move to the next one without stopping the entire process.

> **Browser and Login Issues**: The automation assumes that the browser is already logged into LinkedIn. If there is a session expiration or login issue, the automation will fail. To prevent this we can include a check to verify if the LinkedIn home page is loaded correctly. If the login session is expired, the automation can stop and notify the user to log in again.

> **Excel File Locking or Errors**: If the Excel file is opened by another user or application during the automation's run, it may cause errors while writing the data. To prevent this we can check if the file is accessible before starting the automation.

> **Web Automation Timeout**: Web automation processes, such as opening LinkedIn profiles and extracting data, might face timeout issues due to network speed or LinkedIn's server performance. To prevent this we can set appropriate timeouts for waiting for the page to load or for extracting data.

3. Propose improvements or additional functionalities that could be implemented in future versions of the automation to increase its value for Promtior.

Login Automation: Automate the login process to ensure that the automation can run without manual intervention.

CV Format and Validation: Introduce a feature that checks if the CV is downloaded in the correct format and validate the file integrity. If the file is corrupt or incomplete, the system could try to download it again or notify the user.

Virtual Machine Implementation: In future versions of the automation, it could be beneficial to run the process within a dedicated virtual machine (VM). This would isolate the automation from any manual interventions or activities on the host machine, which could cause the workflow to fail. By running the automation in a VM, the system would avoid any potential conflicts with other tasks, ensuring more consistent results. This approach would also allow the automation to run in the background without interference, increasing reliability and reducing errors caused by external factors.