In the call center where I worked, we would send emails any time we spoke with or left a message for a potential donor. Occasionally, an email would not reach its destination and we would receive an automated reply stating that the email had failed.

These emails pile up quickly with about 50 to 100 coming in per week, and they posed a significant time commitment from the data entry team who would read each one to find the faulty email address then remove it from our records. Because of the required time and employment changes, the data entry team had neglected to address the issue for over a year when I was brought in to help.

By this time, over 3000 emails had been returned and going through each individually was not an option. Luckily, I had some experience writing regular expressions in my classes, so I immediately knew what had to happen to streamline the process. I found a way to convert all the emails into a single raw text file and then set to work writing code to find each failed email address. The data entry team also wanted to know why an email address was not working so I included it as part of the script.

The whole project took about 15 hours to complete and it has saved the data entry team hundreds of hours since I implemented the script as a regular report.

Included here is R script that uses Regex to find and generate a report of failed emails as well as sample text file with fake information for it to work on. The final report is a csv with both the email address and the reason it returned incorrect.