

## "Dropbox" Homework:

Build an application to synchronise a source folder and a destination folder over IP:

1.1 a simple command line client which takes one directory as argument and keeps monitoring changes in that directory and uploads any change to its server

1.2 a simple server which takes one empty directory as argument and receives any change from its client

Bonus 1. optimise data transfer by avoiding uploading the same file multiple times

Bonus 2. optimise data transfer by avoiding uploading the same partial files (files sharing partially the same content) multiple times

You should use Python as the programming language but any operating system of your choice. Please try to avoid high level libraries such as librsync if you are not sure about which library you can use just let me know and we will work it out.

Please also provide a README file describing how to run the application. Please also call out any known shortcomings of your solution and describe improvements that you might like to make.

We like to tell people to spend around 3 hours because we don't want to take too much time from a candidate but of course if you get excited and want to spend more time it's also perfectly fine. You just need to tell us how much time you roughly spent on it.

Also no rush, please come back to us whenever you have time to look into this.