

Automated tuberculosis diagnosis

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This project proposes a technological alternative to improve the tuberculosis (TB) diagnosis in Peru by means of digital images processing and the development of equipment (hardware) with full-custom design. The project uses computational algorithms able to recognize and count the TB bacilli automatically in the microscopic images of sputum. These algorithms are combined with a special hardware to control a standard microscope automatically through a computer, minimizing the intervention of the expert in the process. In this way, the results of sputum smear are obtained up to 10 times faster than the current process and the excessive workload on the health staff is relieved.

This proposal contributes to controlling a national and global public health problem. In addition, it responds to the motivation of developing social responsibility projects with high technical quality and in collaboration with renowned institutions of our country (Dos de Mayo Hospital).