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PROBLEM AND SOLUTION

In AFRICA, it exists many tropical **diseases** on which Africans are **exposed**. They are victims of diseases like VIH, tuberculosis, cholera, Ebola and so many other diseases; but principally of **Malaria** which is the **most dangerous** and the cause of more and more **deaths** in this continent each year. This appear because all of this sickness aren't detected and treat **at good time**. In AFRICA we don't have sufficiently qualify **doctors** and financial resources to treat population, so many localities or villages don't have their own **hospital.** This is one various problem of AFRICA which can be result by creating **AI program** which can recognize infected blood's cells and tell to user from which disease suffer a patient. Then because of **knowing disease** we can simply find **drug**.

IMPORTANCE TO SOLVING THIS PROBLEM

It's really important to solve this problem because it can permit to **decrease mortality rate,** by prevent disease and **alleviate** doctor's **work**. Also, with this program it becomes more easier for people to regularly do **body check point** at **less cost**, and then fast detect and treat infections.

MEHTODOLOGY

To solve this problem, we have started by finding data. We have download on **KAGGLE** cells's dataset containing both **malaria** infected and uninfected blood's cells. After we have used **Pytorch** and **Torchvision** to create program base on **convolutional neural network** that we have trained on downloaded dataset. Then we have saved all parameters in a file name **save_params** that we can use to do fast prediction on another sampler's images. We have joined source code of our program name **Malaria-convnets.py**.

FUTURE WORK

In future we will continuous working on this program by finding more and more **data** of many other **diseases** (VIH, tuberculosis, cholera, Ebola… etc.), in other that our program can be able to recognize **more sickness**. Furthermore, it will be interesting to introduce this program in a **microscope** and with **augmented reality**, use it to analyze **blood** and detect **infection**. So, we have an **intelligent autonomous microscope** which can itself diagnostic diseases.