Title:	Internship proposal.
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Creation of a web service for support requests and file transfers and integration of the service in a C++ Deep Learning application

1   Context

Euresys is a leading and innovative high-tech company, designer and provider of image and video acquisition components, frame grabbers, FPGA IP cores and image processing software. Euresys is active in the computer vision, machine vision, factory automation, medical imaging, and video surveillance markets.

This internship will take place in the Vision software team under the supervision of an experienced software engineer. Euresys is located at Liège Science Park.

The Vision software team develops a free application (graphical user interface) called Deep Learning Studio for creating and annotating datasets, training Deep Learning models, and evaluating their performances. The models produced by the Deep Learning Studio application can then be used with the Open eVision library.

The amount of data handled and generated by Deep Learning Studio can quickly become very large and it complicates support requests from our customers. They need to properly package what they think we need and upload their data to a public file host. Moreover, the images can be confidential and can't be uploaded to public file host or shared with our support team.
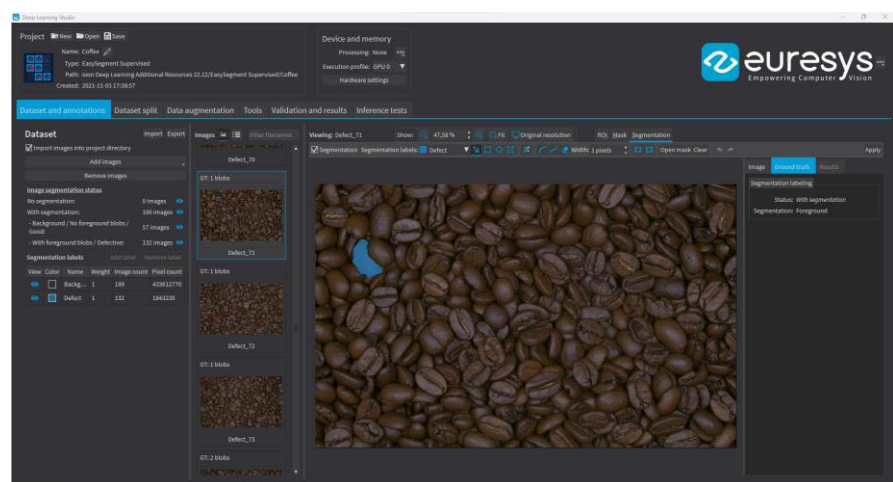

Figure 1 Deep Learning Studio

2   Objective

For this internship, there are two main objectives:

1. Develop a web service capable of receiving support requests and handling large file transfers.

2. Integrate this web service in the C++ application Deep Learning Studio.

In particular, the intern will have to:

-   Propose an API for the web service

-   Implement the web service in python, C#, or Javascript.

-   The web service should handle large file transfers correctly.

-   Develop a system to automatically send e-mail acknowledgments to the customer and forward the support request to the appropriate Euresys support team.

-   Develop a support request UI in C++/Qt for Deep Learning Studio

-   Send the support request to the web service in C++/Qt

-   Package and crypt the data in C++

3   Requirements

The intern should have knowledge or experience of C/C++ and web service development in either python, C#, or JavaScript.

The internship will have a minimum duration of 8 weeks.