**PROJECT DESCRIPTION**

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**Project title**:

HiPerVison Projects on Shelton Vision's Textile Inspection Systems: Backend web-based interface.

**Project description (typically 100 words):**

This project involves working on the Shelton WebSPECTOR surface inspection system which is currently used in various industries to inspect materials for defects. The system uses a combination of vision hardware (lights, cameras and electronics) and software. There are two primary software platforms. The first is the front-end (written in C#) where the operator interface, defect analysis and system co-ordination is done. The second is the back-end (written in C++) where the image processing and defect detection is carried out.

The outline aim of the project is to explore the possibilities of using existing web technologies and services to provide a web-based interface to allow engineers to interrogate the back-end remotely to troubleshoot any faults in identifying defects and adjust parameters.

**List of requirements (objectives):**

Essential

* Review the available technologies
* Create a simple C++ based web service that is able to communicate image and numeric vector data, as well as receive simple instructions.
* Create a client side browser application that can receive and display the image and graph data from the web service
* Enable a protocol for being able to change database fields that the web server and client can both access. The change will then be seen on the client displays

Recommended

* The definition of a more complete API for the backend

Optional

* An extended client side prototype exploiting the API

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