Kyffin Williams: Digital Image Analysis

Report Name	Outline Project Specification
Author (User Id)	Alexander D. Brown (adb9)
Supervisor	Hannah M. Dee (hmd1)
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1   Project description

Sir John "Kyffin" Williams was a Welsh Landscape Painter, widely regarded as the defining artist of Wales during the 20th Century [**?**, p.957-958]. His work, and associated metadata collected by the National Library of Wales, allows for some interesting analysis; particularly that of temporal or geological data for a given painting.

Temporal analysis will be the focus of this project as it allows for a diverse range of techniques; from statistical analysis of RGB values of the paintings to looking at the length and style of paintbrush strokes. The ultimate aim of this being to accurately place the year of a given painting which has no metadata collected.

2   Work to be tackled

2.1   Library and Language Decisions

There are quite a few image processing/computer vision libraries available to use, including:

- AForge.net

- FIJI Is Just ImageJ (FIJI)

- Intergrating Vision Toolkit (IVT)

- Open Source Computer Vision (OpenCV)

- Scillab Image Processing (SIP)

- Vision X Library (VXL)

Some analysis of these libraries needs to be performed before a proper choice is made. This analysis should take into account certain aspects such as cross-platform compatibility, ease of use and install, features available, etc.

2.2   Image Processing and Computer Vision Research

Having never done any digital image processing or computer vision it will be vital to research into the area. For some of the simpler techniques; RGB Statistical Analysis, for example, this is less of an issue.

For the long term viability of the project this needs to be completed before any major work.

I intend to use Hannah and other staff members of the Computer Science Department to aid with this as there is a wealth of knowledge existing there.

3   Project deliverables

4   Initial bibliography