Project conducted by Ryan Collins

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Title Cloud-based RAW Photo Editor

Project Type Graphics and Visualisation

Description RAW Photo Editing is typically done on one machine, which has fairly high levels of performance. This project will investigate the potential of using a thin-client approach of editing photos, with the complex image processing tasks being done in the cloud.

Preliminary Preparation

- An understanding of Image Processing techniques

- An understanding of ReactJS and Redux

- How can I represent image stage (i.e. store images in an intermediary format)

- How can I convert to other files from said intermediary format

Minimum Objectives

- Load DNG RAW files by upload

- Exposure adjustment

- Noise reduction methods (Gaussian, mean, median)

- Web Interface interacting with an image processing server

- Non-destructive image adjustment (i.e. no reduction in quality over time)

Intermediate Objectives

- Modern, user friendly User Experience

- Spot healing implemented

- Haze removal

- cropping, rotating and exporting to other formats

Advanced Objectives

- Addressing scalability issues by using a message queue

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References

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