Level 4 Project

Week 7 Meeting

(Week 6 Recap)

Completed work

- Changed normalisation to handle 16-bit, not 8-bit
  - Quality is a lot better...
  - Issue: changed autoencoder behaviour
- Found way to save resized/cropped images correctly
  - Refactored code into reusable helper functions
- Groundwork for moving code into Colab
  - If performance is not satisfactory will try the computer cluster
- Read about UMAP vs. tsne
  - Could perform better than tsne

Work to come

- Re-tune autoencoder
- Separate out DMSO data
- Move data to Google
- Try running code on Colab
- Follow tsne + UMAP tutorial on MNIST digits to have baseline to compare against

Rough plan for semester, reworked

- ***Week 5***
  - *Tuned autoencoder*
  - *Calculated overlap of images*
  - *Start working on clustering algorithm for image overlaps*
- **Week 6**
  - *HPC training day (hopefully will help with running some models)*
  - *Find way to write images back to disk without losing data*
- **Week 7**
  - Follow tutorial on PCA/tsne with MNIST
  - Separate out DMSO data
  - Colab move
  - Tune autoencoder
- **Week 8**
  - Fit model, save weights
  - Apply chosen clustering algorithm
  - Tune clustering algorithms to improve performance
- **Week 9**
  - Tune clustering algorithms to improve performance
  - ....