PAPERS:

<https://arxiv.org/pdf/1705.02999.pdf> - Zhang’s latest piece - “Real-Time User-Guided Image Colorization with Learned Deep Priors”

<https://arxiv.org/pdf/1603.08511.pdf> – Zhang’s previous work – “colourful image colorization”

POTENTIALLY USEFULL:

<https://www.instructables.com/id/Colorizing-Old-BW-Photos-and-Videos-With-the-Help-/> - tutorial on how to colorize pictures (uses opencv meaning there’s not a whole lot of AI going on) and gives a good explanation of how things work + how to prepare image for the NN.

<https://petapixel.com/2019/07/16/a-technical-look-at-creating-an-photo-restoration-and-colorization-ai/> - a deep dive into the technical stuff. A lot of text, 0 code, can help with getting the concept right.

<https://www.youtube.com/watch?v=9-SiO8lPY94> – video on image colorization.

<https://www.pyimagesearch.com/2019/02/25/black-and-white-image-colorization-with-opencv-and-deep-learning/> - OpenCV deep dive into the code, some explanation is given. Uses cv2.

<https://habr.com/en/company/mailru/blog/459696/> - self-attention GAN stuff to colorize red army Russian guys.

<https://towardsdatascience.com/how-to-perform-image-restoration-absolutely-dataset-free-d08da1a1e96d> - image restoration, not the same as our project but it could make sense to check out their approach.

CODE:

<https://github.com/junyanz/interactive-deep-colorization> - GUI implementation of our project – uses coffee and PyTorch – unusable in its current state.

<https://github.com/PySimpleGUI/PySimpleGUI-Photo-Colorizer> – another GUI implementation of our project. “Transform black and white images (or your webcam) into beautifully colored images using Deep Learning. Uses OpenCV and Numpy to Colorize your photo or webcam video. GUI provided by PySimpleGUI.”

<https://www.freecodecamp.org/news/colorize-b-w-photos-with-a-100-line-neural-network-53d9b4449f8d/> - my alpha baseline. (also: <https://blog.floydhub.com/colorizing-b-w-photos-with-neural-networks/>)

<https://www.kaggle.com/preslavrachev/wip-photo-colorization-using-keras> - pretty much copy of the above link, some explanation is given, alpha quality.

<https://github.com/borisdayma/colorizer> - keras colorizer.

<https://github.com/foamliu/Colorful-Image-Colorization> – another image colorization module

TUTORIAL:

<http://neuralnetworksanddeeplearning.com/chap1.html> - a lengthy tutorial on neural networks and deep learning (the first lesson doesn’t use pytorch nor tensorflow)

<https://distill.pub/2020/grand-tour/> - visualizing neural network s – no code.

<https://course.fast.ai/> - lengthy tutorial – uses pytorch and fast.ai modules

<https://github.com/fastai/numerical-linear-algebra/blob/master/README.md> - another tutorial from fast.ai this time it’s on “Computational Linear Algebra for Coders”.

<https://nbviewer.jupyter.org/github/fastai/numerical-linear-algebra/blob/master/nbs/1.%20Why%20are%20we%20here.ipynb#Matrix-and-Tensor-Products> – numerical linear algebra tutorial by jupyter notebook.

<https://www.fast.ai/2019/07/08/fastai-nlp/> - natural language processing.

<https://pathmind.com/wiki/generative-adversarial-network-gan> - “A Beginner's Guide to Generative Adversarial Networks (GANs)”

<https://mc.ai/coloring-black-white-images-using-deep-learning/> - “Coloring Black & White Images Using Deep Learning” – explains the Lab color scheme, has some code.

<https://mc.ai/colorizing-black-white-images-with-a-deep-neural-network/> - “Colorizing black & white images with a Deep Neural Network”