Final project

Each team will deliver a presentation about the project 10-15 min long in the order listed below. If you want to swap presentation order with another team, please let me know. Your final presentation will be delivered via MS Teams and prepared using Beamer or Powerpoint or Keynote or a similar software. My suggestion is to have about 6-10 slides. Please assume that there will be a few questions.

I encourage each team to share with me a draft of the presentation at least 24 hours before the presentation.

After your presentation, no later than May 9, each team will hand in a final project that will include the **final slides** of you presentation and the (brief) **final report** organized according to my previously provided instruction:

1. Name and email of students
2. Title of project
3. Bibliographical information of paper (or papers) selected
4. Overview (max 200 words). Summarize the topic and main results of the paper(s).
5. Outcomes (min 200 words). Report your findings. Depending on your project objectives, this might include: a detained explanation of the main proofs of the paper; the derivation of special cases or examples from general theorems; the expansion or generalization of proofs or other results; the description of a numerical code you developed illustrated by numerical results.

Presentations list

1. **Molina & Safari:** Super-Convergence: Very Fast Training of Neural Networks Using Large Learning Rates
2. **Pahari & Rodriguez:** Relations between Convolutional Neural Networks (CNN) and Convolutional Sparse Coding (CSC)
3. **Oyeleye & Zhiliakovy**: Auto-encoder interpolation.
4. **Su & Vu: I**ntroduction to Convolutional neural network (CNN) and applications in face detection.
5. **Thacker:** Shannon's Sampling Theorem II: Connections to learning Theory
6. **Zhao:** Metamorphosis of Images in Reproducing Kernel Hilbert Spaces.
7. **Abouserie & Stickler**: Comparison of Loss Functions Used in Classification.
8. **Bai & Su:** Comparison Study of MLP and SVM.
9. **Chen, Huanh & Niu:** The assessment of different SVM classifiers in breast cancer prediction models.
10. **Cortez & Subedi:** An exploration of probabilistic support vector machines
11. **Davies:** U-Net: Convolutional Networks for Biomedical Image Segmentation.
12. **Fularczyk**: Quantum Machine Learning in Feature Hilbert Spaces
13. **Goligerdian & Palzhanov:** Solving ill-posed inverse problems using iterative deep neural networks.

Calendar (tba)

4/22: Team 1
4/24
4/27
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5/06 (11am-2pm)

1.