






# AI 835 Self-supervised Learning (SSL) || Course Material Posting Links

## V. Ramasubramanian || Aug – Dec 2023


1. Posted on 3 Aug 2023 || Main Course Link – with sub-folders|| Class-Notes-Slides || Review-Survey-Papers  
<https://drive.google.com/drive/folders/1-DDvA6HilokLH40Kh40zpiH1AuJbGK?usp=sharing>
2. Posted on 3 Aug 2023 || 1 PDF to sub-folder Class-Notes-Slides/Aug-2023
  - a. #1-SSL-Introduction-1-Aug-2023.pdf
3. Posted on 3 Aug 2023 || 9 PDFs to sub-folder Review-Survey-Papers/
  -  #1-2021-2022-Stanford-Report-On the Opportunities and Risks of Foundation Models
  -  #2-2023-A Cookbook of Self-Supervised Learning
  -  #3-2022-IEEE-SPM-Self-Supervised-Representation-Learning-Introduction-Advances-and-Challenges
  -  #4-2023-A Survey of Self-Supervised Learning from Multiple Perspectives
  -  #5-2023-IEEE-T-KDE-Self-Supervised-Learning-Generative-or-Contrastive
  -  #6-2022-ACM-Comp-Survey-Self-Supervised-Learning-for-Videos-A-Survey
  -  #7-2021-IEEE-T-PAMI-Self-Supervised-Visual-Feature-Learning-With-Deep-Neural-Networks-A-Survey
  -  #8-2022-IEEE-SASP-Self-Supervised-Speech-Representation-Learning-A-Review
  -  #9-2022-Patterns-Audio-self-supervised-learning-A-survey
4. Posted on 12 Aug 2023 || 3 PDFs to sub-folder Class-Notes-Slides/Aug-2023
  - b. #2-SSL-Introduction-3-and-8-Aug-2023.pdf
  - c. #3-SSL-DL-Basics-8-Aug-2023.pdf
  - d. #4-SSL-Sup-Unsup-SelfSup-Notations-10-Aug-2023.pdf
5. Posted on 16 Sep 2023 || 3 PDFs to sub-folder Class-Notes-Slides/Aug-2023
  -  #5-SSL-Error-Decomp-17-Aug-2023
  -  #6-SSL-Analysis-24-Aug-2023
  -  #7-SSL-Analysis-29-Aug-2023
6. Posted on 16 Sep 2023 || 3 PDFs to sub-folder Class-Notes-Slides/Sep-2023
  -  #8-SSL-Pretext-Task-Rotation-5-and-7-Sep-2023
  -  #9-SSL-Pretext-Task-Relative-Position-12-Sep-2023
  -  #10-SSL-Pretext-Task-SimCLR-14-Sep-2023
7. Posted on 16 Sep 2023 || 2 PDFs to sub-folder Reference-Papers/
  -  #1-2018-ICLR-Predicting-Image-Rotations
  -  #2-2015-ICCV-Predicting-Relative-Position
8. Posted on 22 Sep 2023 || 1 PDF to sub-folder Class-Notes-Slides/Sep-2023
  - a. #11-SSL-Pretext-Task-SimCLR-21-Sep-2023.pdf
9. Posted on 22 Sep 2023 || 1 PDF to sub-folder Reference-Papers/
  - a. #3-2020-ICML-SimCLR.pdf

## Postings of Material – after Mid-term Exam




10. Posted on 5 Nov 2023 || 5 PDFs to sub-folder Class-Notes-Slides/Oct-2023

-  #12-SSL-Oct-Nov-Schedule-12-Oct-2023
-  #13-SSL-Pretext-Task-APC-CPC-Speech-Primer-12-Oct-2023
-  #14-SSL-Pretext-Task-AR-LPC-VAR-19-Oct-2023
-  #15-SSL-Pretext-Task-APC-26-Oct-2023
-  #16-SSL-Pretext-Task-CPC-31-Oct-2023

11. Posted on 5 Nov 2023 || 1 PDF to sub-folder Class-Notes-Slides/Nov-2023

-  #17-SSL-Pretext-Task-CPC-2-Nov-2023




12. Posted on 5 Nov 2023 || 3 PDFs to sub-folder Reference-Papers/

-  #4-2019-Interspeech-APC
-  #5-2022-IEEE-J-STSP-APC
-  #6-2019-arXiv-CPC




13. Posted on 18 Nov 2023 || 1 PDF to sub-folder Class-Notes-Slides/Nov-2023

- a. #18-SSL-Pretext-Task-APC-CPC-Results-7-Nov-2023.pdf



14. Posted on 18 Nov 2023 || 3 PDFs to sub-folder Class-Notes-Slides/Nov-2023

-  #19-SSL-Pretext-Task-LM-Basics-1-7-Nov-2023
-  #20-SSL-Pretext-Task-LM-Basics-2-9-Nov-2023
-  #21-SSL-Pretext-Task-Encoder-Decoder-Seq2seq-16-Nov-2023




15. Posted on 18 Nov 2023 || 3 PDFs to sub-folder Reference-Papers

-  #7-NIPS-2000-A-Neural-Probabilistic-Language-Model-Bengio
-  #8-2003-JMLR-Bengio-2003
-  #9-NIPS-2014-Seq2seq-Learning-with-Neural-Networks



16. Posted on 24 Nov 2023 || 2 PDFs to sub-folder Class-Notes-Slides/Nov-2023

-  #22-SSL-Pretext-Task-Attention-Transformer-21-Nov-2023
-  #23-SSL-Pretext-Task-Transformer-GPT-23-Nov-2023




17. Posted on 24 Nov 2023 || 3 PDFs to sub-folder Reference-Papers

-  #10-2015-ICLR-Attention-Bahdanau
-  #11-2017-NIPS-Transformer-Vaswani
-  #12-2018-arXiv-GPT-Radford

18. Posted on 1 Dec 2023 || 2 PDFs to sub-folder Class-Notes-Slides/Nov-2023

-  #24-SSL-wav2vec-28-Nov-2023
-  #25-SSL-wav2vec2.0-30-Nov-2023

19. Posted on 1 Dec 2023 || 3 PDFs to sub-folder Reference-Papers

-  #13-2019-Interspeech-wav2vec
-  #14-2020-NeurIPS-2020-wav2vec-2.0
-  #15-2020-NeurIPS-2020-wav2vec-2.0-Supplemental