DS-GA 3001.009
Modeling Time Series Data
Lab 10

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NYU

- Project Workshop
  - Project Structure
  - Examples
  - Submissions
  - Q&A

- **Final Report**
  - **Introduction**
  - **Related Work**
  - **Problem Definition & Algorithms**
  - **Experiments**
  - **Conclusion**

- **Introduction**
  - What is the problem?
  - Why it is important?
  - Motivation & applications.
  - Why it is technically challenging?
  - What's your contribution?

- **Related Work**
  - What are the previous works that focus on the same/related problems?
  - How do they approach the problems?
  - What's the difference between your methods and theirs?
- **How to search for related papers?**

- **Problem Definition & Algorithms**
  - Formally define the problem. What's the input and output? What are the constraints?
  - What are your assumptions?
  - Define the notations.
  - Describe your model using formula and plots.

- **Problem Definition & Algorithms (cntd.)**
    - ○ Provide intuition/rationale for your model design/parameter choice.
    - ○ Go through a concrete example that illustrates your models.

● **Experiments**
  ○ What tasks do you evaluate your models on?
  ○ What datasets do you use for each of the tasks? Any preprocessing?
  ○ Experiment set-up. How do you split the data? What computational resources do you use?

- **Experiments (cntd.)**
    - Illustrate the model performance.
    - Analysis on the performance. What's your hypothesis? Does the performance support your hypothesis?
    - Error Analysis. What's the strength/weakness of your models?

- **Conclusion**
    - Summarize what you did.
    - What do you learn from the project?
    - What are these future improvements?

- **Example: Data Analysis Project**
  - [SDNE](#)
  - [SAT](#)
- **Example: Literature Review Project**
  - https://arxiv.org/pdf/1705.02801.pdf

- **Project Types:**
  - Literature Review
  - Model Comparison
    - At least re-implement 1 model
  - Data Analysis
- **Grading**
  - 60% report
  - 40% presentation

- **What to submit?**
  - A pdf report, LaTex, [NIPS 2017](#)
  - Min **5** pages, Max **10** pages, excluding references.
  - Your code with clear comments.

● **Deadlines**
    ○ Report due **04/26** by midnight.
    ○ Presentation is in class on **05/01**.