**Cover Letter for ELEG5491 Final Project 2017**

***Part A: Completed by Student***

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| Paper  ID | 1155070507 | Student Name | Zhizhong Li | Topic Area | 1. GAN 2. Visualization |
| Title: | Geometric View of GAN and Visualization | | | | |
| Abstract | We view the task of Generative Adversarial Networks as manifold learning. Instead calling it as noise, we see the latent space as the coordinate of the data manifold. The generator is the function that maps coordinates to data manifold. Thus, other than the traditional approach that investigating the probabilistic properties of the noise distribution and the data distribution, we ask whether the geometric properties of latent space and data manifold interact with each other. Specifically, we visualize the effect of dimensionality and connectivity of latent space and data manifold using specially designed synthetic experiments. | | | | |

***Part B: Completed by Course Staff***

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| Review Comments from TAs | | | | | | Paper Rating |  | | |
| This paper investigates the generative adversarial networks from the perspective of data manifold. The idea is novel, help the society to understand the capability of GAN. The paper is well organized. In the experimental section, the author used several toy example to demonstrate the manifold. Overall, this is an excellent work, except a minor issues: 1. The introduction is used to describe your method, instead of motivate your idea. Please shorten the motivation and use more space to describe your own method. 2. Figures are overlapped. 3. Please add some explanation and conclusion to the figures.  -----------------  (Update based on final submission)  I like the paper. | | | | | | | | | |
| TOTAL: \_\_\_\_\_\_\_\_\_ Score in details: | | | | | | | | | |
| Proposal (10%) |  | | Poster (10%) |  | Paper (50%) Presentation (30%) | Paper:  Presentation: | | Bonus |  |
| TA-in-charge | |  | | | Instructor’s Signature |  | | Date | Apr \_\_\_ 2017 |