**CSCE 623: Machine Learning**

**Spring 2020**

**PROJECT FIRST DRAFT PAPER GRADING WORKSHEET**

Due Thur, 9 Jun at 2359

Submit via Canvas

**(**This draft is worth 10 points toward your final grade: 8 for completeness and 2 for quality**)**

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| --- | --- |
| Course points earned | 0.0 |

**Demore\_Mark\_A\_projectFirstDraft\_grading\_worksheet.docx**

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| Criteria | Sub Area | Avail points | Student performance | Student Score |
| Completeness | INTRODUCTION  - motivate the problem  - clear research question/hypothesis/objective | 2 | Achieved | 2 |
| Completeness | RELATED WORK  - minimum = course text | 1 | Achieved | 1 |
| Completeness | APPROACH / METHODOLOGY  - Describe data and preprocessing steps  - models defined  - hyper-parameters & validation scheme  - performance measures defined  - comparison to what baseline? | 3 | Achieved | 3 |
| Completeness | (EXPECTED) RESULTS | 1 | Achieved | 1 |
| Completeness | REFERENCES  - minimum = course text  - citations in main text  - ref section | 1 | Achieved | 1 |
| Quality | Length (1000-3000 words) Spelling/Grammar | 1 | Good | 1 |
| Quality | Logic / Flow | 1 | Good | 1 |
| TOTAL |  | 10 |  |  |

**Other Comments:**

Good first draft.

Since Marvin did the same thing ML activity on the same ML dataset last year (CSCE 623 and Thesis) you should definitely compare your results with his findings – with a goal to do better. Include the details of his findings in your related work section. (let me know if you need a copy of his CSCE 623 project final paper)

Another important thing is that in a time series dataset like this, especially when the GPS spoof is a constant-rate peeloff from the true coordinates, spoof detection becomes easier the further you get from the true GPS cords. Thus, performance of your spoof detector should be reported as a function of both the peeloff rate AND the time since the peeloff started. Mission wise, the USAF cares about both – they want to detect not just the obvious peeoloffs, but also the more subtle ones, and they always want to detect them ASAP.

If you are actually going to do this research for your thesis, then I recommend you try to build a more realistic dataset by using more realistic GPS spoofing patterns (not just a uniform rate peeloff in one direction). You can discuss things like this in your future work section of your final CSCE 623 paper.