UCLA ECE 114
Speech Machine learning Project
Grading Guidelines
Due 11:59pm, Thursday, December 5th, 2019

You are to work on this project in groups of 2-3. The written report and all code used must be submitted on CCLE by the due date. Submissions will be graded on the following criterion:

Report Structure – Report is clearly written following ICASSP 2020 paper format (https://2020.ieeeicassp.org/authors/paper-kit/). Reports are no more than 4 pages long and explain the motivation behind the project, the methodology used, the results found, the conclusions drawn, and possible next steps. The paper should focus on the group's most successful results. However, the group may also include details of less successful attempts along with reasoning for why they were not as successful in order to gain credit for all of the work done. All sources used should be cited in IEEE bibliography format. All MATLAB and Python should also be submitted.

Novelty – The project submission introduces a new, creative component designed to increase performance or lower the cost of computation. Groups may choose to build off of existing ideas in the field or introduce completely novel ideas.

Implementation of class concepts – The project submission should demonstrate knowledge of the concepts taught in class. The group should apply their knowledge of speech processing to their feature extraction and neural network implementation and clearly explain their reasoning in their report.

Performance – The project submission should achieve reasonable high performance. This may be demonstrated by achieving a high test accuracy or by achieving a reasonable test accuracy with a low computational complexity.

Use of Available Tools – The group should take full advantage of the tools available to them for this project, including but not limited to Voicebox, VoiceSauce, built-in MATLAB functions, Tensorflow, and other Python machine learning libraries. Groups should document how they experimented with these tools and explain their final design choices in the report.

Future Work – The group should explain how their work could be improved upon given more time and computational resources. The report should detail how the group's implementation could be modified to achieve higher test accuracy with lower computational complexity and give possible real-world uses for the design.

| | 5 - Criteria fully met | 4 - Criteria mostly met with a few errors or missing component | 3 - Criteria met with several errors or missing components | 2 - Criteria partially met and shows steps towards being more fully met | 1 - Criteria not satisfactorily met | 0 - Criteria not met at all |
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| Report Structure | | | | | | |
| Novelty | | | | | | |
| Implementation of class concepts | | | | | | |
| Performance | | | | | | |
| Use of Available Tools | | | | | | |
| Future Work | | | | | | |

Total Score: /25

There are 30 points available. However, the project will be graded out of 25 points. This means that there are extra points available for groups that perform exceptionally.