

Final Report Grading Rubric

Demo:

VERSION A: MUSIC

| | Did Not Demonstrate [0 Points] | Attempted Demonstration [5 Points] | Demonstrated [10 Points] |
|-------------------|---|--|--|
| Sound Collection | Mic/Front end circuit did not work | Mic/Front end circuit worked sometimes | Mic/Front end circuit works as expected |
| Genre Recognition | SIXT33N does not differentiate between genres | SIXT33N sometimes differentiates between genres (~50%) | SIXT33N differentiates between genres (>80%) |
| Controls I | SIXT33N does not drive straight when expected | SIXT33N sometimes drives straight as expected | SIXT33N responds as expected: (1) Turns on the first cycle (2) Drives straight on subsequent cycles |
| Controls II | SIXT33N does not turn when expected | SIXT33N sometimes turns when expected | SIXT33N responds as expected: (1) Turns on the first cycle (2) Drives straight on subsequent cycles |
| General | Little effort was put into SIXT33N | Some effort was put into SIXT33N | Significant effort was put into SIXT33N |
| TOTAL | | | 50 POINTS |

VERSION B: SPEECH

| | Did Not Demonstrate [0 Points] | Attempted Demonstration [5 Points] | Demonstrated [10 Points] |
|------------------|---|---|--|
| Sound Collection | Mic/Front end circuit did not work | Mic/Front end circuit worked sometimes | Mic/Front end circuit works as expected |
| Word Recognition | SIXT33N does not differentiate between words | SIXT33N sometimes differentiates between words (~50%) | SIXT33N differentiates between words (>80%) |
| Controls I | SIXT33N does not drive straight when expected | SIXT33N responds drives straight when expected | SIXT33N responds as expected: (1) Go straight fast (2) Go straight slow (3) Turn left (4) Turn right |
| Controls II | SIXT33N does not turn when expected | SIXT33N sometimes turns when expected | SIXT33N responds as expected: (1) Go straight fast (2) Go straight slow (3) Turn left (4) Turn right |
| General | Little effort was put into SIXT33N | Some effort was put into SIXT33N | Significant effort was put into SIXT33N |
| TOTAL | | | 50 POINTS |

Report:

| | Did Not Included [0 Points] | Some Discussion [1 Points] | Discussed [2 Points] |
|------------------------------|---------------------------------------|--|--|
| Front End Circuit | No discussion of circuit | Some discussion of circuit | Front end circuit discussed: - Give the final schematic - Explain each stage of the circuit and why it is needed - Give expressions for the gain and frequency response of each stage |
| Front End Circuit Schematic | Did not include Schematic | Schematic is included, but unclear | Schematic is included and clearly labeled |
| PCA | No discussion of PCA | Some discussion of PCA | PCA Discussed: - Discuss which commands (words or genres) worked well and which did not. - Explain any processing you implemented to make the PCA or classification more robust |
| Controls – open loop | No discussion of open loop | Some discussion of open loop | Open Loop Discussed: - Open loop model |
| Controls – closed loop | No discussion of closed loop | Some discussion of closed loop | Closed Loop Discussed: - Closed loop model - Explain why closed loop is necessary |
| Controls – controller values | No discussion of controller values | Some discussion of controller values | Controller values discussed: - Explanation for chosen k values |
| Controls – turning | No discussion of turning | Some discussion of turning | Turning discussed: - Explain how you modified your control scheme to allow for turns |
| Closed Loop Block Diagram | Did not include block diagram | Block diagram is included, but unclear | Block diagram is included and clearly labeled |
| General – What you learned | Did not discuss what was learned | Some discussion of what was learned | Discussed what was learned |
| Effort | Little effort was put into report | Some effort was put into report | Sufficient effort was put into report |
| TOTAL | | | 20 POINTS |