# Project 3 Poster Grading Rubric

| | **Expert** | **Proficient** | **Apprentice** | **Novice** |
|---|---|---|---|---|
| Project Requirements | Project meets all requirements:<br>1. Develop a hypothesis that can be tested using one of the available sensors.<br>2. Use the Arduino-board and at least one sensor.<br>3. Use Matlab to analyze the data including either a t-test or linear regression.<br>4. Create graphics within Matlab to represent data. These could include plots of the data, bar graphs, or histograms. | Project meets most requirements, but is missing or incomplete in 1 category. | Project meets many requirements, but is missing or incomplete in 1-2 categories | Project is missing on several requirements. |
| Background and Research Question | Clear concise background and research question. Hypothesis clearly stated. Hypothesis and research question match with methods and results presented. | Hypothesis and/or research question clearly stated and match methods and results. | Hypothesis and research question stated but not well formed or may not match methods and results. | Hypothesis and research question not clear and not matching methods and results. |
| Researcher Interview | Research described clearly including a description of overall research questions and methods used by the reviewer in clear language. | Research described with a description of the overall research questions and methods. Language may contain jargon or be less clear. | Overall research questions and methods described but not clearly. | Lack of description of research questions and/or methods. |
| Methods | Arduino data collection includes description of circuit diagram, sensors used and coding approach. Post processing in Matlab clearly described including statistics. Clear figures used. Methods could be reproduced from description. | Most elements of data collection are described but lacking in a few details that may make the collection more difficult to reproduce. | Several elements of data collection are not described or figures are unclear. | Significant aspects of the data collection are unclear. |
| Results and Graph | Clear graphics demonstrate the findings of the research. An appropriate statistical tool is selected (linear regression or ttest or other) to assess the hypothesis. Text complements graphics and makes finds clear to all readers. | Graphics demonstrate findings of the research. Some elements of the presentation of results may be less clear to all readers. | Results are presented both in text and graphically but some findings are unclear. | Significant elements of the results and graphics are unclear or missing. |
| Cohesiveness, conclusions, and layout | The poster is clear and well laid out. Research questions align with methods and results. Conclusion summarize findings, explain implications of findings, and describe limitations and/or future directions. | Poster is generally clear. Conclusions could be better formulated. | Poster is disjointed or not well structured. Conclusions could be better formulated. | Poster is poorly structured. Conclusions are lacking in details such as limitations and future directions. |
| Spelling and grammar | No spelling &/or grammar mistakes. | Minimal spelling &/or grammar mistakes. | Noticeable spelling & grammar mistakes. | Unacceptable number of spelling and/or grammar mistakes. |