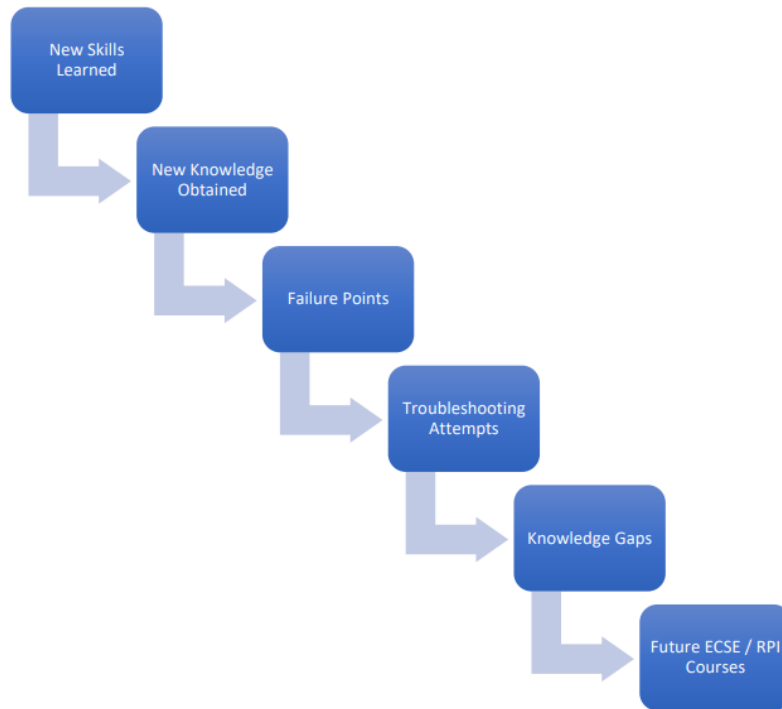


Omega Exploration Map

Please fill out the following sections of your map for your project. Many of you will learn skills or concepts that are beyond the Intro to ECSE concept list. Please provide references, links to website, pictures or screenshots of how you explored in your project!



Contents

New Skills Learned	2
New Knowledge Obtained	2
Failure Points	3
Troubleshooting Attempts	3
Knowledge Gaps	4
Future ECSE/RPI Courses	4

New Skills Learned

Did you learn a new skill or use a skill you know a bit about in a different way?

Yes, we learned how to use filters in Simulink and how to apply them to determine a hidden message in a noisy signal.

Furthermore, we learned that altering stop band and pass band configurations in filters helps to more accurately pinpoint a specific frequency.

New Knowledge Obtained

Did you obtain or use new knowledge? If so where did you get the information?

Yes, our group gained new knowledge by going to office hours and learning what to look for in the frequency domain in order to effectively determine the frequency at which the hidden message is located.

Failure Points

Did you see any failures through the process? What were those failures?

Failure 1. At first, we were applying multiple filters without knowing if they were configured correctly.

Failure 2. We were not familiar with what to pinpoint and identify when it comes to filtering a hidden message.

Troubleshooting Attempts

How did you attempt to troubleshoot and iterate through those failures?

Troubleshooting 1. Pinpointing where peaks were in the frequency domain to determine a range that we should be concerned with.

Troubleshooting 2. Reading through the lecture notes and the lab document.

Troubleshooting 3. Using the provided video as a resource to help guide us.

Knowledge Gaps

What is some knowledge that you need to obtain to finish, calculate, understand, or improve your design?

It would help to learn how to decode Morse Code since our group members are not familiar with the area. Having this would be good for determining the inherent meaning of the message.

Learning how to build a physical filter would also be useful to prove that the design works in the real world and that the simulation is accurate.

Future ECSE/RPI Courses

Can you find any course that might help you in the future to make a better design? Explain how it will if you can.

ECSE 2010 - Circuits. This course can help us learn how to build physical filter circuits.

ECSE 2410 - Signals and Systems. This course can help us understand more about filters and their complexity, which could be useful for designing more elaborate filters.

Exploration Map Grading

Exploration Map Standards

Exploration Completed