

Radar Target Generation and Detection

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Are you unable to review the project due to a compilation error, missing files, etc.? Is this submission plagiarized? Do you need to report the student for abusive language?

CAN'T REVIEW

FMCW Waveform Design



For given system requirements the calculated slope should be around $2e13$

Great work! When I run your submission, I see a printed slope of $2.0455e+13$.

 EDIT

Simulation Loop



A beat signal should be generated such that once range FFT implemented, it gives the correct range i.e the initial position of target assigned with an error margin of ± 10 meters.

Well done!

 EDIT

Range FFT (1st FFT)

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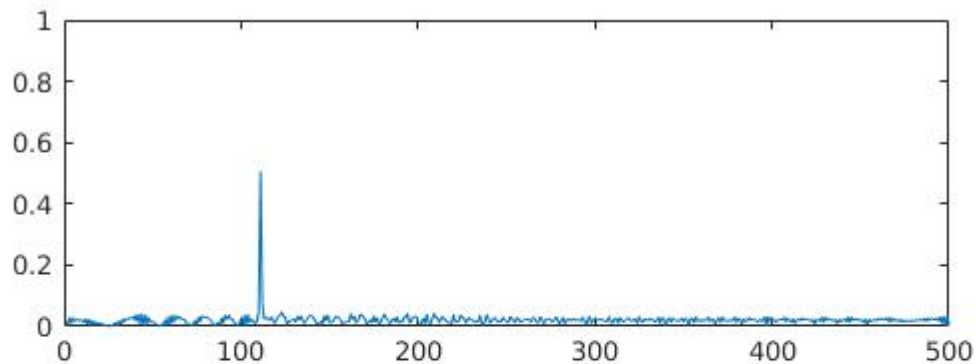

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 SUBMIT FEEDBACK

A correct implementation should generate a peak at the correct range i.e the

A correct implementation should generate a peak at the correct range, as the initial position of target assigned with an error margin of +/- 10 meters.

Excellent work! The initial distance to the target is set at 110m. The plot from running your code shows a peak at the correct range.



 EDIT

2D CFAR



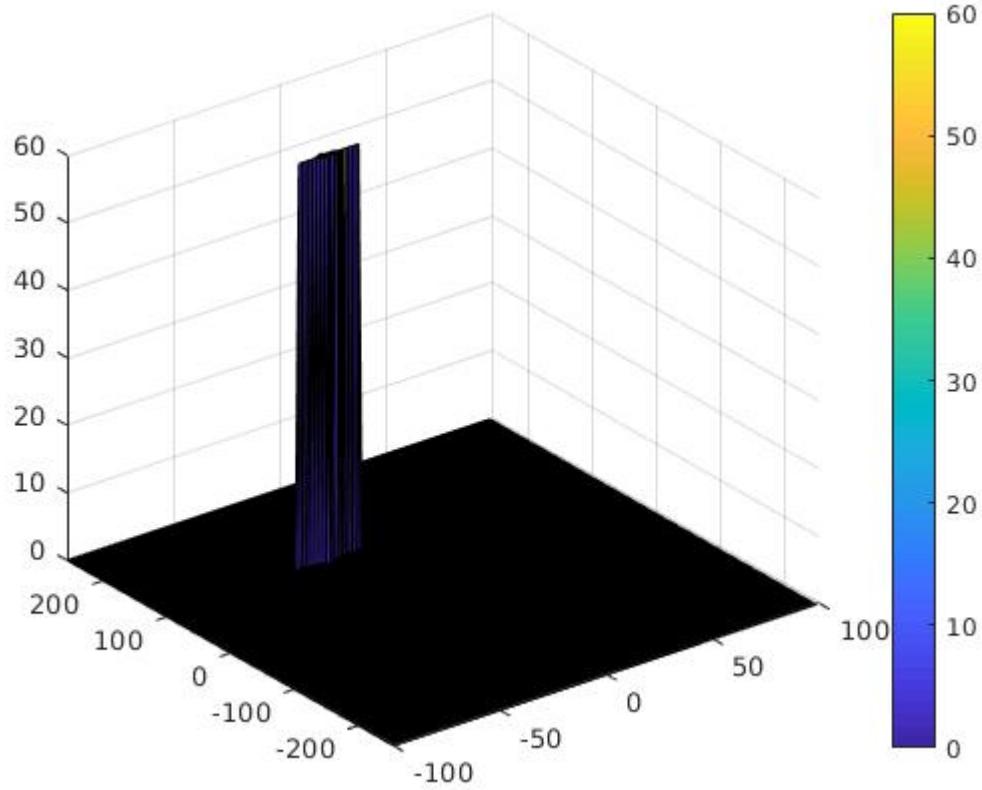
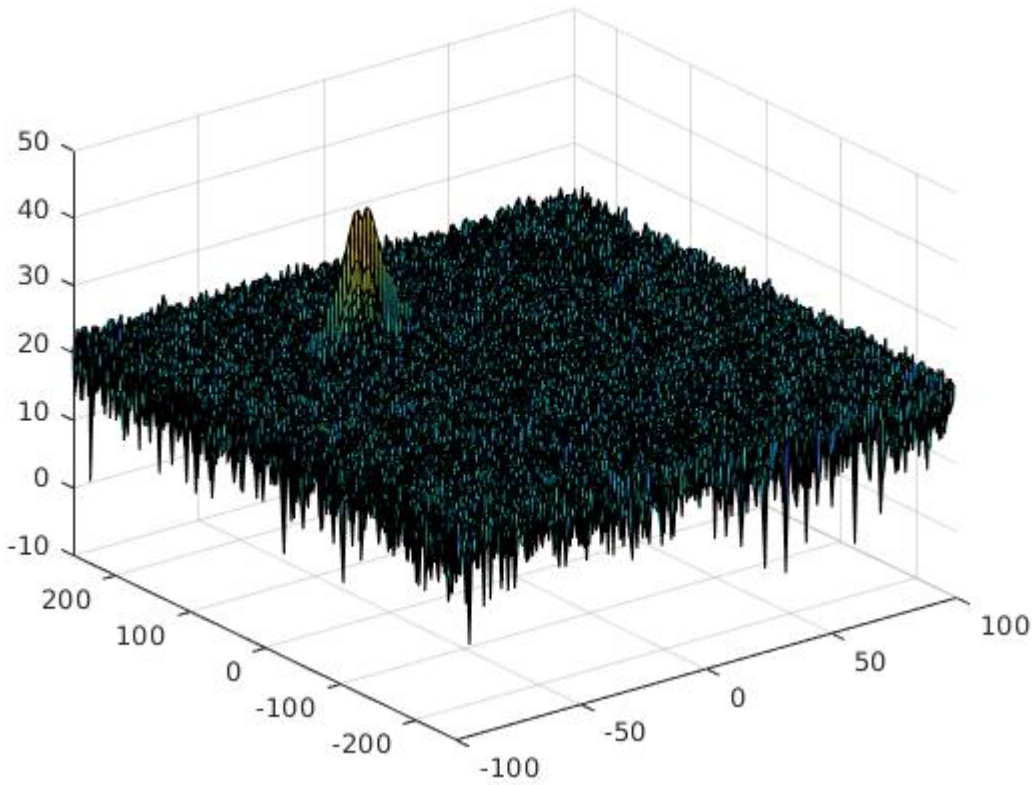
The 2D CFAR processing should be able to suppress the noise and separate the target signal. The output should match the image shared in walkthrough.

Great work, the 2D CFAR processing suppresses the noise and separates the target signal. The output images match the walkthrough well:

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In a README file, write brief explanations for the following:

- Implementation steps for the 2D CFAR process.
- Selection of Training, Guard cells and offset.
- Steps taken to suppress the non-thresholded cells at the edges.

Your parameter choices are documented here, but it would be nice to see a little more explanation about how you arrived at these parameters.

 EDIT

Additional Reviewer Comments

Great work on your project here! The code is well written, and the results look very nice.

EDIT

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