

NSF GRFP Resources - From Joe Cloud

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Hi Bardia,

Here are some resources I recommend for the NSF fellowship:

Alex Lang primer (kinda out of date, but good advice on application content):

<https://www.alexhunterlang.com/nsf-fellowship>

Sample essays from previous winners:

<https://docs.google.com/spreadsheets/d/1xoezGhbtcpg3BvNdag2F5dTQM-Xl2EELUgAfG1eUg0s/edit#gid=0>

Solicitation documents, make sure to find the latest one for your application cycle:

<https://www.nsf.gov/pubs/2018/nsf18573/nsf18573.pdf>

It is really important that you pay good attention to the preparation instructions and ANY suggestions on content that the applications are assessed on. Use it as a checklist and think about to craft your essays so that they cohesively address criteria. In some ways, imposing some constraints may help you generate ideas.

For us robotics folks, I think it is particularly helpful to read other NSF calls in that area, like NRI 2.0:

<https://www.nsf.gov/pubs/2018/nsf18518/nsf18518.htm>

These large NSF program solicitations give some criteria on how they review larger grants, but the review panels for these grants will overlap with the fellowship.

Following on to the previous point, you may find it helpful to bounce ideas/read abstracts from funded NSF grants:

<https://www.nsf.gov/awardsearch/>

What I did was use search terms (and PI names that I know aligned with my research interests) to scope out projects funded by NSF. These abstracts are usually tied to several references which may be helpful for your proposal development and concept.

If you're trying to figure out the focus, one thing to try is skim through recent (but well-received) survey papers. The future works/needs sections tend to highlight problems that can be helpful for identifying challenges for us grad students to focus on.

Here is one such example that I had bookmarked:

https://nsf.gov/awardsearch/showAward?AWD_ID=1723381&HistoricalAwards=false

Also, there are several fellowships with a similar application cycle. Writing a good foundation application will make it easier to apply to other calls as requirements are also similar:

- NSF GRFP
 - DOD NDSEG
 - NASA NSTRF
 - NASA Texas Space Grant Consortium
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- Various industry fellowships (Facebook, IBM, NVIDIA, Texas Advanced Computing Center, etc..) which come with added benefit of guaranteed internships.

Finally, in case you're interested, here is a pretty comprehensive reference on DMPs:

<https://homes.cs.washington.edu/~todorov/courses/amath579/reading/DynamicPrimitives.pdf>

Hope this helps. Happy to discuss further and my own application.

Thanks,
Joe