**Project 1.2 – Mentor Reflection – Planning**

Prompt –

1. Who, where, and when you met your mentor.
   1. Who – Sean Henderson, over the phone (although technically in person at some point in my life, either at a wedding or family reunion), either 3/14/2024 or 3/15/2024
2. What did you learn from the interaction? Especially, anything surprising?
   1. *I think this will generally entail figuring out what they were saying, which means that I should probably record the conversation and/or have a transcript (but make sure to ask for consent to do so, especially since he works with DoD stuff).*
3. Share observations about the value of the interaction.
   1. *I’m not really sure what this means, maybe the emotional/anxiety side of things since (as engineering students) we don’t really know what opportunities we will have or what the work will really entail?*

General Tips From Lectures –

* Mentor Questions – Make it a useful time
  + Do your homework on your mentor (if you haven’t yet)
  + “Ask the second question” and third!
  + You might not know what to ask – think like an engineer and design the interview
* Reflection should answer two major questions –
  + What did you learn?
  + Brief summary of when/where/how you met

*Going into detail on these –*

* First, I will need to figure out what questions I want to ask
  + The “designing the interview” and “ask the second question, and the third,” seem to be saying that I should both plan a basic outline of what I want to ask and where I want to steer the conversation, but that if a question comes up during the interview that I didn’t write down beforehand I should ask it still.
    - That means that recording the interview, or at the very least getting a transcript of it, is going to be important
* The bad thing is that I essentially can’t look them up, but I do know that they work at the West Chester GE Aviation division (so whatever they do there he has some sort of involvement with)
* Figuring out what I learned from the interview should be pretty easy, it’s just whatever they said, but to save myself the headache I should probably plan the interview out the way I would want my paragraph(s) to flow
* The brief summary of when/where/how we met is going to be rather brief seeing as I literally do not remember meeting them in person since I was a little kid and that I’m meeting them now through the internet/a phone call.

Overall, the main thing now is to figure out what I want to learn, then structure those into categories that can be formatted into an essay or interview easily, then write questions with the answers being what I want to learn, and then I should call him.

Figuring Out Questions – I want to know…

* What they do generally, at least what they can tell me
  + What specializations they have (hypersonics, material deformation, thermodynamics, etc.)
  + What their form of work looks like – as in a lot of paperwork, CAD-ing, computations/simulation, etc.
* How they got there
  + What internships or coops they did and how those experiences helped them
  + What classes they found the most important or what additional (non-required) classes helped them in their career
  + What software or programming tools I should be familiar with
* What led them to apply/work for GE Aviation?
  + What was their motivation to work there?
* Finances as an Engineer (if they are comfortable with discussing)
  + It’s been suggested by my father that engineers usually get better benefits packages in comparison to non-STEM fields, if it is not too private of information, in your career how much of a percentage of your salary were those benefits worth?
  + How comfortable are you with your salary?
    - With the current US housing market, do you think you would be able to afford to buy a house (asking this to see if it would be something I might be able to afford in the future)?
    - Also, if you’re comfortable with sharing, what percentile are you in US Aerospace Engineers?
* Things they wished they knew going into the job or general career
  + If there are skills they don’t teach people in college, or skills that aren’t taught sufficiently well (either technical or business-/teamwork-related)
* What working with the DoD/with a security clearance is like
  + Do they ever get worried about having a higher security clearance/working on potentially confidential projects (either from the US government or other governments)?
  + What sort of impact does it have on your ability to travel or general right to privacy?

Questions In A Formal Format –

1. What do you do (more specifically) as an aerospace engineer?
   1. Do you specialize in any aerospace topic (hypersonics, thermodynamics, acoustics, etc.)?
   2. What does your work entail? Is it mainly focused on CAD, physics simulations, presentations, paperwork, or something else?
2. How did you come to work at GE Aviation?
   1. What internships, coops, or research opportunities did you take part in?
   2. What college courses (undergrad or graduate) did you find to be the most important or helpful when starting your career?
   3. What software or programming knowledge should an aerospace engineer be familiar with?
   4. Are there any specific tools or programs that newer aerospace engineers lack (that could potentially give me an edge in future applications)?
   5. Are there any courses that you took during college that were not required for your bachelor’s degree that you found helpful when starting your career?
   6. What led you to work for GE Aviation specifically?
3. I have heard from my parents that you most likely work on projects that might be confidential/require certain levels of security clearance – if you are able to and comfortable with talking about it – what does work under such clearance requirements look like and how does it affect your life?
   1. What impact does a project’s confidentiality have on your ability to work? For example, are you required to go through regular interviews or are unable to bring work (or some work-related materials) home?
   2. Do you ever have worries about working on confidential projects (in terms of the safety of your family, however Hollywood-action-movie-like that sounds)?
   3. Does working on such projects impact your ability to travel or your general privacy?
4. If you are comfortable with discussing it, how comfortable are you with your financial and/or benefits situation as an aerospace engineer?
   1. It has been suggested by my father that engineers usually get better benefits packages in comparison to non-STEM fields, if it is not too private of information, in your career how much of a percentage of your salary were those benefits worth?
      1. Or to put it another way, have you ever taken a job that paid less in salary but due to its benefits package was worth more money overall? How did you determine if it was worth it (if this is not just an easy answer by looking up different insurance plans)?
   2. How comfortable are you with your salary in the current economy?
      1. What did your salary progression look like in your career? How long did it take to go from your starting salary to your current salary (and if you are comfortable with disclosing it, what percentile among aerospace engineers are you in salary)?
      2. Were there any points in your career and/or family life where your salary became a major worry?
      3. With the current US housing market, how possible do you think it would be for a starting to mid-career aerospace engineer to purchase a one family home (this is one of the more worrying questions for me currently)?

*Ok so the questions seem to be done, or at least the ones that I will plan to ask, so now I need to write a script as to what I will say in a call to Sean that will get across all the information that I need to (in case I get sent to voicemail).*

Hi Sean, this is Ben Baker, I’m the son of your cousin Nicole Baker, and I wanted to call and see if we could meet over a phone or video call in the next few days to ask about your work at GE Aviation and as an aerospace engineer. I’m currently a sophomore aerospace engineering student at the University of Tennessee, and while I have been planning on contacting you to ask questions about aerospace engineering in general, I also have a paper in my engineering professional topics where I need to interview current engineers. I can send you my schedule for the next four days in addition to the questions I would like to ask, but I don’t want to clutter your texts inbox if you will be busy (and I’d like to be sure I’ve got the correct number as well). Thanks for listening.

**Questions For Sean –**

1. What do you do (more specifically) as an aerospace engineer?
   1. Do you specialize in any aerospace topic (hypersonics, thermodynamics, acoustics, etc.)?
   2. What does your work entail? Is it mainly focused on CAD, physics simulations, presentations, paperwork, or something else?
2. How did you come to work at GE Aviation?
   1. What internships, coops, or research opportunities did you take part in?
   2. What college courses (undergrad or graduate) did you find to be the most important or helpful when starting your career?
   3. What software or programming knowledge should an aerospace engineer be familiar with?
   4. Are there any specific tools or programs that newer aerospace engineers lack (that could potentially give me an edge in future applications)?
   5. Are there any courses that you took during college that were not required for your bachelor’s degree that you found helpful when starting your career?
   6. What led you to work for GE Aviation specifically?
3. I have heard from my parents that you most likely work on projects that might be confidential/require certain levels of security clearance – if you are able to and comfortable with talking about it – what does work under such clearance requirements look like and how does it affect your life?
   1. What impact does a project’s confidentiality have on your ability to work? For example, are you required to go through regular interviews or are unable to bring work (or some work-related materials) home?
   2. Do you ever have worries about working on confidential projects (in terms of the safety of your family, however Hollywood-action-movie-like that sounds)?
   3. Does working on such projects impact your ability to travel or your general privacy?
4. If you are comfortable with discussing it, how comfortable are you with your financial and/or benefits situation as an aerospace engineer?
   1. It has been suggested by my father that engineers usually get better benefits packages in comparison to non-STEM fields, if it is not too private of information, in your career how much of a percentage of your salary were those benefits worth?
      1. Or to put it another way, have you ever taken a job that paid less in salary but due to its benefits package was worth more money overall? How did you determine if it was worth it (if this is not just an easy answer by looking up different insurance plans)?
   2. How comfortable are you with your salary in the current economy?
      1. What did your salary progression look like in your career? How long did it take to go from your starting salary to your current salary (and if you are comfortable with disclosing it, what percentile among aerospace engineers are you in salary)?
      2. Were there any points in your career and/or family life where your salary became a major worry?
      3. With the current US housing market, how possible do you think it would be for a starting to mid-career aerospace engineer to purchase a one family home (this is one of the more worrying questions for me currently)?

**Questions for Electrical Engineer –**

Salary –

* Electrical Engineer –
  + Payscale - bottom ten percent is $65k, median of $84k, 90% is $123k
* Aerospace Engineer –
  + Payscale – bottom 10% is $69k, median is $92k, 90% is $141k
  + Indeed - low $66.8k, average $102k, high $156k
  + CareerExplorer – bottom 20% is $77k, median is $122.3k, top 20% is $168.4k

1. What do you do (more specifically) as an electrical engineer?
   1. Do you specialize in any electrical engineering topic (control systems, power systems, microelectronics, electrophysics, etc.)?
   2. What does your work entail? Is it mainly focused on CAD, (electro-)physics simulations, presentations, paperwork, or something else?
2. How did you come to work at your current company?
   1. What internships, coops, or research opportunities did you take part in?
   2. What college courses (undergrad or graduate) did you find to be the most important or helpful when starting your career?
   3. What software or programming knowledge should an electrical engineer be familiar with?
   4. Are there any specific tools or programs that newer electrical engineers lack (that could potentially give me an edge in future applications)?
   5. Are there any courses that you took during college that were not required for your bachelor’s degree that you found helpful when starting your career?
   6. What led you to work for your current company specifically?
3. If you are comfortable with discussing it, how comfortable are you with your financial and/or benefits situation as an electrical engineer?
   1. Throughout my time in college, it has been suggested that engineers usually get better benefits packages in comparison to non-STEM fields. If it is not too private of information, in your career how much of a percentage of your salary were those benefits worth?
      1. Or to put it another way, have you ever taken a job that paid less in salary but due to its benefits package you chose to work there? How did you determine if it was worth it (if this is not just an easy answer by looking up different insurance plans)?
   2. How comfortable are you with your salary in the current economy?
      1. What did your salary progression look like in your career? How long did it take to go from your starting salary to your current salary (and if you are comfortable with disclosing it, what percentile among electrical engineers are you in salary)?
      2. Were there any points in your career and/or family life where your salary became a major worry?
      3. With the current US housing market, how possible do you think it would be for a starting to mid-career electrical engineer to purchase a one family home (this is one of the more worrying questions for me currently)?