**Tell me about yourself.**

Hi, I am Chin Zheng Yang. I am currently a final year mechanical engineering student (with a specialization in Energy & the Environment) at Nanyang Technological University who will be graduating in next May. I am Dean Lister and an NTU President Research Scholar. I am hoping if everything goes as expected I should be graduating with an Honours with Highest Distinction, which is equivalent to a First-Class Honours previously.

Regarding my educational background, I am always a hardworking guy and have a strong passion to learn new skills and get in touch with the latest technologies. For example, I learn programming language like Python in my free time by taking online programming course. Talking about job related skills, I come with analytical mindset and good problem-solving skill. For instance, I had encountered a critical problem when I was doing an internship with Schlumberger which would affect the outcome of my project adversely. Not only that I was able to solve this major problem, but also managed to help my company to save some money and eventually completed my project before deadline.

I am interested in the oil & gas industry and have a strong passion to become an engineer to apply what I have learned in school in real world. Since ExxonMobil is the leading company in the oil & gas industry, I really want to become a part of the organization. Once again, thank you for providing me this precious chance to come here and participate in the interview session.

1)What do you see yourself in short term/5 years

In the short term, I hope to work as a Mechanical Engineer for a company such as yours. I wish I can grow together with a company where I can continue to learn, enhancing my skills and continuing my involvement in this field. Moreover, hopefully I am able take on expanded team leadership responsibilities in the future, as these become available.

In 5 years, once I gain additional experience, I would like to have the opportunity to move on from a technical position to management. I know this has been a common path for many people in this position, and I think in time this would be a logical move forward for me. I have had inspirational managers that I really admired and would love to manage my own team in a few years.

2) What do you know about us?

ExxonMobil SG is the regional headquarters for ExxonMobil downstream and Chemical businesses in Singapore. The downstream sector is the refining of petroleum crude oil and the processing and purifying of raw natural gas as well as the marketing and distribution of products derived from crude oil and natural gas.

We own and operate a 592,000-barrel-per-day (bpd) refinery, which is fully integrated with the Singapore Chemical Plant (SCP). Together, the refinery and chemical plant form 7ExxonMobil's largest integrated manufacturing site in the world. In Singapore, we also own an extensive network of service stations under the Esso brand and supply cylinder cooking gas (LPG) to many households. We also supply the commercial market in Singapore and those around the region with industrial, aviation and marine fuels and lubricants. We also market liquefied natural gas.

3) Why ExxonMobil?

Recently, I saw this news ExxonMobil Partners with “Singapore Universities to Focus on Energy Innovation and Lower-Emissions Technologies”, and I found out that ExxonMobil is trying to pursue technologies to help meet growing energy demand while reducing environmental impacts and the risk of climate change. Personally, I am very interested on energy field, and that’s the reason why decide to specialize in Energy & the Environment in my Mechanical Engineering.

Firstly, I think that ExxonMobil’s available positions are in line with my career interests. ExxonMobil reputation is also a factor. I would be proud to work for a leading company in the industry. Moreover, a good friend of mine has been working in ExxonMobil as intern and he told me that the culture supports learning and development on the job. I really like this corporate culture as I have a strong motivation to learn continuously and get in touch with the latest technologies.

4) In what ways can you contribute to our company? (Similar to strength)

I would contribute my acquired knowledge and skills through previous experience and my learning capability to acquire new knowledge for attaining company goal. For example, I would like to incorporate my programming skill and mechanical engineering skill together for the good of company.

5) What do you think are the qualities required for this position?

1. Strong analytical and critical thinking skill
2. Collaborative approaches
3. Good interpersonal and communication skills
4. Resilience
5. Adaptability
6. Effectiveness

6) Job Description

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7) What personal non-career-related goals have you set for the next ten years?

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8) Do you have plans for continued study?

While I don’t have any plans at this time to complete an advanced degree, I will attend seminars, workshops, on-the-job training and other courses with great enthusiasm in order not to fall behind on new technologies and help my department to be better. It’s important to me to be at the top of my game, so I can be the best employee that I can be.

9)Which is more important to you, the money or type of job?

In my opinion, work is slightly more important than money because by working hard I can get desirable money, but there should be a balance between the effort and the money I've got so then I'll be satisfied.

10) What do you think determines an individual’s success in a work situation?

I believe there is a strong correlation between individual work ethic and his/her success during jobs. Some examples of work ethics include initiative, reliability, determination and team orientation. As a successful employee, he had to take initiative to look for opportunities to solve problems and make a difference. He needs to show up when he said he was going and deliver what he promised. He also needs to have the determination to face obstacles and willing to go the extra mile for the good of the team.

11) How do you determine success?

For me, success is setting a goal, planning the steps required to achieve it, and implementing that plan effectively. Once I think I have achieved that goal, I have succeeded.

12) How has NTU prepared you for a career in (teaching, law, engineering, etc)?

NTU has a solid curriculum for Mechanical Engineering student, by which makes me acquire fundamental knowledge of several important subjects like Mechanics of Materials and Fluid Mechanics and Thermodynamics. Which I believe is very important because I am able to investigate equipment failure and evaluate the mechanical integrity of piping, like minimum thickness of piping in certain section of the equipment needed. Moreover, I can calculate the correct amount of fluids/natural gas/petroleum passed through piping between equipment using knowledge from Fluid Mechanics and Fluid Dynamics. Besides those fundamental subjects, NTU also provided me a chance to do internship with Schlumberger, through this precious chance to work together with professional engineers. Not only I had successfully developed technical skills like the ability to use Creo, ANSYS Fluent, I also able to acquire career skills like presentation skills by conducting a 30min presentation session about what have I done during my internship for my manager and co-workers from my department. I believe that skills I had picked up through the amount of years I have spent in NTU will help me to become a successful engineer.

13) If you could start again, what would you have done differently?

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14) Describe one or two accomplishments that have given you the most satisfaction? Why

The project that I completed on my recent internship gave me a lot of satisfaction, since I not only completed the project earlier and deliver good results, but also currently being adopted at my intern employer. My intern employers are also satisfied with my outcomes. I am proud that I was able to develop an effective protocol to carry out the project and eventually provide substantial benefits to my department. Let me tell you more about if you are interested about my project details, can I continue?

15) What was your most rewarding university experience

I was fortunate enough to be able to spend one full semester studying abroad in Czech Republic. Via having the chance to study or doing project with student from different nationalities, I have a better understanding and appreciation for people from different culture and background. I think this is very important for an employee who works in multinational company like ExxonMobil as we will engage and work closely with people from different countries. Moreover, as I had to being on my own throughout one semester, it really brought out my independent nature and self-awareness as I had to confront challenges outside a familiar support network and stepped out from comfort zone.

16) What have you learned by participating in CCA?

By having the chance to become a financial event of National Cashflow Competition, I have developed interpersonal skills. National Cashflow Competition is a national level competition which involved more than 600 primary and secondary students. It is a board game competition that’s is kind of like Monopoly, but this board game aims to teach primary and secondary students about fundamental financial knowledge. As this board game is rare to be seen, we must teach the participants beforehand about the rules and regulation of the game before they go into the competition. I went to several primary school to train the young participants. I have become a more patience and responsible person as not every kid is smart, I have to put into extra effort or change my teaching method to make sure all my attendees understand the rule of the board game and this is the responsibility of mine.

17) What do you expect from an employer? Describe the relationship that should exist between a supervisor and subordinates

I would like to be able to go to my manager if I have an issue or idea and to be able to feel comfortable in expressing my thoughts. I would also expect my supervisor to be open and honest with me and to let me know if there is anything I could do to improve upon or do differently in my work.

18) What kind of work environment do you prefer? /What kind of environment are you most comfortable in?

I can be flexible when it comes to my work environment. Based the information from ExxonMobil Singapore website, it looks like the environment department in ExxonMobil is fast-paced and structured to expand. I enjoy working in an area experiencing rapid growth, and I think many times this kind of environment is conducive to new ideas and applications."

19) Do you prefer working alone or with others? Why?

I can work both on a team and work alone and that depends on the project that needs to be done. For the most part, I prefer working independently to meet my deadlines but enjoy collaborating in a group to spark fresh new ideas.

20) What two or three things are most important to you in your job?

Growth potential is the most important thing to me in any role I accept. I look for good growth potential in terms of my own role within the company and especially in terms of the company’s overall growth. I’d love to work for a company that is innovative and always looking for new opportunities to expand. Secondly, I look for companies who have a positive and adaptive culture. And finally, a healthy level of respect and trust. A positive workplace will create high levels of respect and trust amongst its employees. It is important to me that my co-workers can respect and trust me just as I can trust my co-workers.

21) Describe a challenge you have encountered. /What major problem have you encountered before and how did you deal with it?

During my internship with Schlumberger, I faced a technical problem that no one internally had no idea about the approach to solve the question. It had to do with a performance issue on my 3D scanned model which was negatively affecting the accuracy of Computational Fluid Dynamics (CFD) simulation. In short, if I am unable to solve this problem, the 3D model that I successfully digitalize cannot be used. I was able to effectively not only solve this critical problem, but also successfully develop a protocol to solve this kind of problem, so that my co-workers can follow my steps to solve this kind of problem. Here is what I did and resolved the problem…

We assumed one of the components is two-sided opened Pringles can, 3D scanner are like human eyes, receive information by reflection of light, inner details cant be scanned, inaccurate for CFD model as crude oil will flow thru the inner passage of ‘Pringles Can’. After do some research on internet, I decided to use one new programme named Geomagic Studio to reconstruct the inner flow passage based on the 2D CAD diagram and introduce this software to my supervisor and manager. My CFD simulation result has a 25% increased efficiency over the unmodified model and my supervisor was satisfied with my approach

22) Give an example of when you had to influence someone to take action./persuade ppl

While working on my recent internship with Schlumberger, I needed access to data from a department to complete one segment of my project. The head of that department initially refused my request for access to the data. Eventually, I went to my supervisor to seek assistance and he said it was a learning opportunity for me to work it out on my own. So, I asked the department manager to meet in person. At that meeting, I walked him through the scope of my project, how the data would be used and how it would be kept secure. Once he understood the actual use of the data and its security, he authorized my access later.

23) Share with us a time where you had to deal with a difficult person.

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24) Share with us a time where you had to creatively solve a problem.

Same thing loh(3d scanning, CFD quality), instead of suggest my supervisor to buy an extra handheld 3D scanner for a few thousands bucks, search online, Geomagic. Provide satisfactory output. Save costs

25) Are you analytical? Give an example.

Same answer for QS21 and 24

26) Do you consider yourself a leader or follower? Why?

In past experiences, I have been able to adapt to whatever was expected of me. When a group needed a leader, I was more than capable of handling that role, but at the same time, I recognize when it is better to take a step back and take direction from someone who is more knowledgeable than I am.

27) What would you do if you were given a tight timeline in a project you are unfamiliar with?

I would maintain a positive outlook and utilize my organizational skills to develop a plan of the project. I would start by organizing the tasks from most important to least, and then I would begin working on the most important task. I also like to break down larger, heftier parts of a project into bite-sized chunks. If there were any tasks I could delegate to other capable individuals, I would not be afraid to ask for assistance. Doing so allows me to keep cool and not get overwhelmed while working up against the deadline. Lastly, so if I saw that I absolutely could not accomplish my project on time after I had tried my best to organize and plan in that project, I would ask for an extension from my supervisor.

28) What are your weaknesses and strength**?**

I am a hardworking person, action-oriented and has a strong motivation to learn continuously. As the digital technologies are rapidly transforming and disrupting traditional industries, we employee, should not be only focus on our main field, we should have the will to continuously upskill in order to keep up with the latest trends. For example, big data is so popular, and it is impacting major industries. For example, I believe it will affect the inspection industry as well. With the vast amount of data generated by inspection program, we can use the data to build models that will lead to other better decisions and strategic business moves. (Save money, provide better solution for reliability of equipment and piping using model built). Based on this background, I will like to combine my Mechanical Engineering knowledge with highly technically IT skills. So, I had register for several Python Courses related to Data Analysis and Data Visualization on Coursera since last semester, and I used my free time during nights after I leave the office to watch lecture, do quizzes and projects. After few months, I have successfully passed my Python specialization course with flying colours and managed to continuously apply and elevate my Python scripting skill in my FYP.

Moreover, I am adaptable guy and a good team player. Via having the chance to do project and mingle with student from different nationalities during my semester exchange programme in Czech Republic, have a better understanding and appreciation for different culture and people. For example, we were asked to form a team of 5 from different nationalities to do an academic project about to design a mechanical gearing model. I took the initiative to become the leader and break down the project into several tasks and assign to my teammates. There was once time one of my groupmates, A was not happy with another groupmate, B sloppy effort on the project, I took the initiation to help B on his work and have a group discussion with them to help them eliminate misunderstandings. Eventually, our results were good, and Professor were satisfied with our works, and we all get A grade on this subject, everyone was happy. I think this trait is very important for an employee who works in multinational company like ExxonMobil as we will engage and work closely with people from different countries.

Well, every coin has two sides, one must always have their own weakness, as a student who is still studying, I discovered that sometimes I will treat problem from a student perspective, which is a taboo for professionals. I want to change my mindset as we are graduating, and will step into work field real soon, when I am doing my FYP projects with professors and research engineer, I will communicate with them proactively to learn their way of thinking as professionals.

Well, every coin has two sides, one must always have their own weakness, I was never confident with public speaking-which as you know, can be a hindrance in the workplace. When I realized this was a problem, I took the initiative to become the presenter in every academic project in school. As a result, I was able to overcome my fear and since then, I have given one 30min presentations to all my managers and coworkers in my department to demonstrate what have I done throughout my internship and going to join a presentation competition soon as suggested by my previous supervisor in Schlumberger. Regarding this, I still find public speaking challenging but enjoyable for me now.

29) What do you do during your free time?

In my spare time, I take online programming classes brush up my knowledge base and learn new programming language like Python and SQL. As we are in an information era and computers are used in every engineering field. Coding leverages me to a position above the average engineer who fears computer programming and becoming a more productive mechanical engineer. Moreover, I enjoyed working out in a gym. As exercise will let me more energetic, motivated when I am working. Employees with enhanced energy, improved brain function will lead towards a better overall performance.

30) Do you have a role model or mentor?

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31) Do you have any question for us?

a. As an experienced engineer, can you briefly explain how you spend your working day in ExxonMobil?

b. Which one of the company cultures make you feel proud of? Which one of the company cultures you like the most?

c. As a manager/supervisor of junior engineers, what are the most important traits a junior engineer should acquire?

d. Lets’ say I am lucky and capable enough to successfully get the offer from ExxonMobil, may I know what shall I prepare and learn in advance before I start my job?

e. How long did you work in ExxonMobil? What the reasons that makes you stay?

f. What are the prospects of \_\_\_\_\_\_ department?

g. My weaknesses

32) How do you handle conflict?

During year2, there was one module called Engineering, Innovation and Design project, which also known as EID in short. 8 peoples were formed into a team randomly. At first, thing was going well and successfully come out with an idea to make a smart plate collector, but suddenly a conflict about the embodiment design occurred between two team members who could no longer work effective together. Their relationship began affecting the productivity of whole team. The first thing I did was separate them to calm the situation. I then proceeded to meet with both parties to discuss the problem in a calm and controlled setting. I took control of the discussion and made it clear that a compromise must be reached. One of my main objectives during the meeting was to understand the perspectives of both parties without siding with either one. At first, this was difficult since each party presented their arguments without considering other perspectives. To counter this, I made it clear to each party that changes must be made since the status was unworkable. Shortly thereafter, we agreed to a workable solution. Before concluding the meeting, I emphasized that during future disagreements each party must act considerately and avoid getting emotional. After our meeting, work resumed as normal and the overall work atmosphere became more pleasant. We successfully delivered our products, and our supervising professor was satisfied with our outcome, all of our teammates managed to get a A+ grade for that module.

33) Why should we hire you?

I really believe in the value of teamwork and so when I saw a position with your company to join your engineering department I had to make sure my application was put in. I believe strongly in working with other people towards a common goal and I know the skills I bring not only as an engineer, but as a team member will not only bring me work satisfaction but will make me a valuable teammate as well.

34) How do you deal with differences of opinion when working on a team?

I always appreciate different viewpoints from my own. When someone expresses a different opinion, I listen carefully to what the person says and utilize that feedback

35) Tell about me a time you made a biggest mistake

When I was doing on my URECA project, as our project team consists of 2 undergraduate members. One of our team members go to holiday, so our supervising prof need to find volunteers to carry on his workload, I accepted his on-going tasks as in I didn’t want to seem like I couldn’t handle extra work without checking out my schedules. When the deadlines for one project unexpectedly changed, I couldn’t meet both deadlines. I admitted the issue to my Prof, my Prof brought on his PhD student to help meet the accelerated deadline. After this incident, I had become a more organized and reliable person. For instance, I will use application to note down my daily, weekly tasks to be done and indicate important project deadlines and where I am in the process at any given time and I am able deliver the results to my supervisor according to what I promised. Since then, I have never missed a deadline.

36) Tell me what you have done illegally to achieve certain objective.

When I was working on my URECA project, there was one time that I unable to replicate a good experimental result due to time constraint. And I need to include one PhD candidate’s experimental result in my final report. I did not inform my professor about this. What I have done has violated the academic integrity principle. The lesson that I have learnt from this incident is I will go to my professor to seek for his approval to cite his PhD student results. If Prof didn’t approve my request, I will not include PhD works in my own report since that is illegal and even though I might not get a good grade on this subject.

37) Let say you got this job; how would you repay the community.

If I am lucky enough to secure this job, there are few things that I can do at this stage. For example, I can volunteer to become a social worker at nursing home and volunteer to donate blood. I volunteer because I feel it is part of being a human being. I think we are designed to help one another. If I have a longer vacation, I might want to go for volunteer teaching in remote areas. This is because I really believe an individual action, whether big or small will have an impact on someone’s life. For example, by teaching someone to speak English, I am helping them to break the poverty cycle by giving them access to better job opportunities.

∙        Plan and carry out fixed equipment/piping inspection via on-stream risk-based monitoring programs and downtime inspection activities

∙        Advise business teams/units on inspection program findings and recommend appropriate solutions for corrosion issues, to ensure safe and reliable operation of equipment

∙        Investigate equipment failure and recommend cost-effective methods of repair and material selection

∙        Maintain effective working relationships and communication with business teams/units, to eliminate or minimize material and corrosion issues

∙        Monitor latest developments in inspection/materials and corrosion technology, via inter-affiliate technology transfers, network communications and meetings

∙        Develop and update piping and fixed equipment strategy as leading indicators for reliability

∙        Maintain effective Inspection Data Management system and filing system, including periodic updates

∙        Provide appropriate recommendations, mitigations and timely updates on equipment degradation problems

∙        Provide quality assurance on project construction and maintenance works to ensure compliance with applicable codes, standards and specifications

∙        Conduct reviews and/or updates on Materials Suitability Reviews and Equipment Strategies to ensure equipment reliability