

1.1 Achievement

COMPLETED

2301

hours

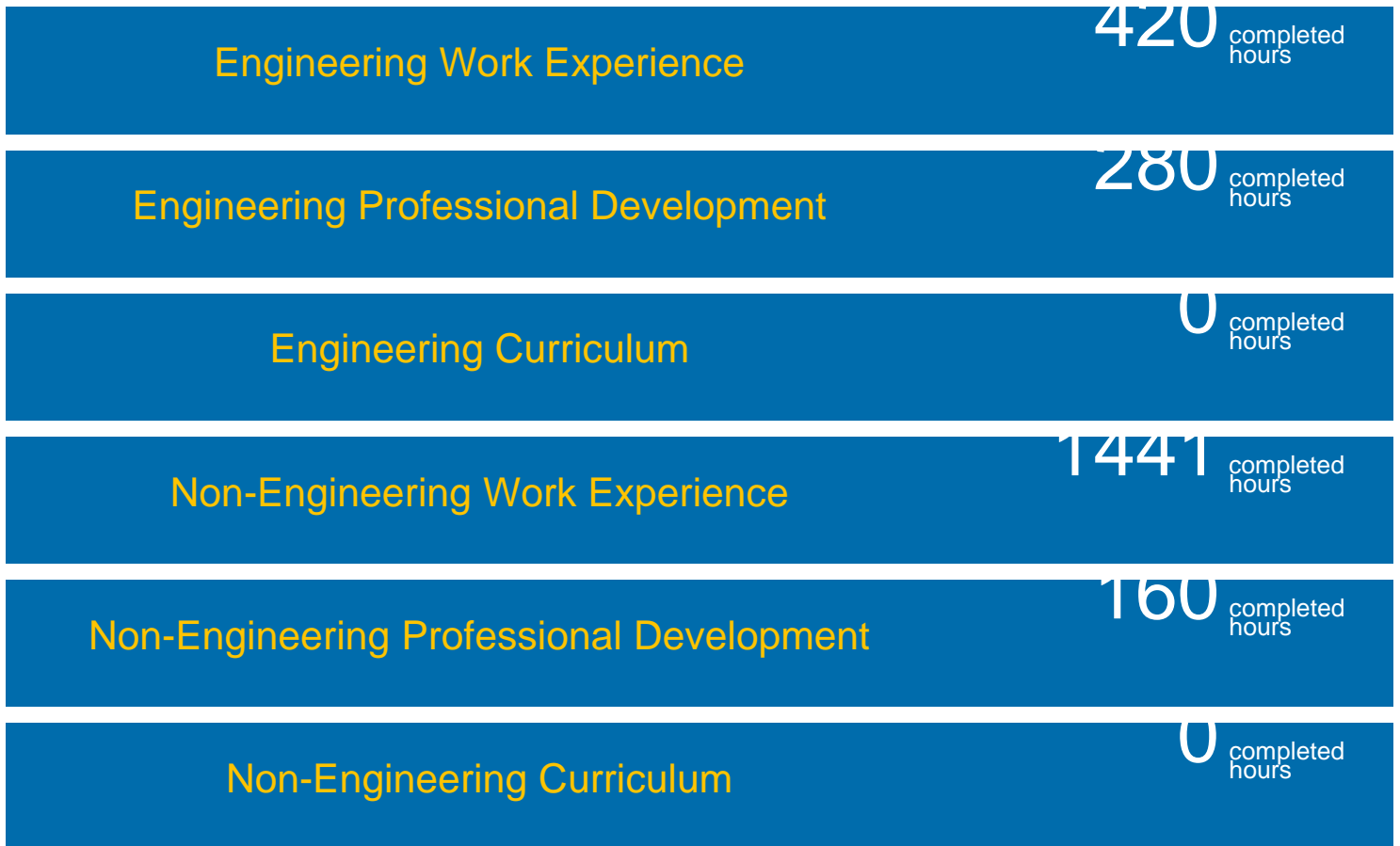
TARGET

420

hours



1.2 Activity Summary



1.3 Reflection Summary

President of (Student Club)

Hours claimed: 200 hour(s) as Engineering Professional Development
(Information about club removed)

At Monash University, there is an (club) chapter, a movement of students who believe in the work of (the club) and implement local activities that add to the collective work of the organisation. I served almost 18 months as President of (Student Club), after several years as a volunteer and committee member. As President, I was responsible for ensuring that the team was psychologically safe, we did impactful and personally meaningful work, and that we challenged and grew ourselves and the organisation.

Contact: (removed)

Position: (removed)

Phone: (removed)

Email: (removed)

SKILLS UTILISED:

Initiative and Enterprise

Describe a situation when you used initiative and created enthusiasm and support to make things happen.

I had developed an idea to set up a weekend-long hackathon event, after being inspired by some other colleagues in other organisations. It would be the first kind of this event (club) would host and we knew it would require a lot of time and effort. We also knew it would be tricky given we were a non-profit and had little funds; we wanted to make it accessible to students to attend but also wanted to host a worthwhile event.

I needed to first pitch the idea of the hackathon to the committee for approval and support. This I did by emphasising how the event would align with our overall objectives and how it would present us with a great opportunity to develop skills, increase our exposure to students and industry and overall grow as individuals. After everyone agreed, we set up a team dedicated to planning and implementing the event.

Leveraging my position as President, I set about garnering support from potential sponsors - namely Monash University and other clubs around campus. In particular, I met with and secured support from one of the university institutes (club #2) - a great win as the support involved human resources on the day and financial aid. After setting up the team, we developed and acted on our plan. This involved a) engaging with the engineering industry to get event mentors b) marketing the event to students (sign-up, registration) c) logistics (catering, equipment, venue, gifts, prizes etc.) d) planning how the event would run on the day (event content, format). Key to the whole process was my ability to kickstart the project and then channel this energy to the team. I was transitioning out of my President position leading up to the event, therefore, it was critical that the team felt and had ownership over the event; that they didn't need me there to make things happen.

The team ran a successful event, especially for the first time. We had mentors and students attend (I also attended to help out) and received positive feedback from both. It ran smoothly and as professionally as it

could given it was a volunteer-led event. The team was enthused and motivated all on their own and it made me proud that they took on the project with such vigour.

Teamwork

Describe a situation in which you were instrumental in treating team members with equal respect and fostering positive working relationships.

I was elected to Presidency role at (Student Club) Monash. I was in the role for 2.5 years.

As President, I was charged with working with the Vice-President to lead a team of 15 committee members and a wider membership base of 350-400 students. My focus was on empowering my team so they could excel in their roles. Tasks included administrative tasks (e.g. chairing meetings, workshops), people leadership (mentoring members) and organisational tasks (e.g. coordinating and running team retreats).

As President, I made a commitment to be a leader that was respectful and would foster a positive team. I went out of my way to get to know each member of the team through individual catch-ups, making them feel known and valued. At the beginning of meetings, we would take turns in sharing answers to a 'question of the day'. At retreats, I set up team building activities. Sometimes, we would have social team events. I fostered respect by setting an example. And I made myself accessible and approachable in-person / phone / email or other.

We developed a strong team culture where everyone respected each other and could work better together. This was crucial especially when we would have changing committee members (re-elected annually) over time. We had members continue to stay with the organisation and express positive emotions about being a part of the team.

(Student Club) Design Summit India

Hours claimed: 80 hour(s) as Engineering Professional Development

The (Student Club) Design Summit Program is a 2-week intensive study tour aimed at complementing academic engineering studies by teaching concepts of human-centered design in the context of a different country, culture, language, and values.

Skills developed: cultural sensitivity, cross-cultural communication, critical thinking, empathy, teamwork, engineering design, stakeholder engagement

In Madurai, India, and within a team of 3, (name) used a consultative process to develop a simple, innovative design prototype to reduce manual handling in coconut cutting for the agricultural sector of rural villages. The design was intuitive, affordable, easy to replace and culturally appropriate. It received great positive feedback and is currently held by the local partner organisation for further community adaptation.

Contact: (removed)

Position: (removed)

Phone: (removed)

Email: (removed)

SKILLS UTILISED:

Creativity and Innovation

Describe a time when you were able to develop or design a novel product, processes or strategies.

As part of the study tour, we we would use the human-centred design principles we were learning about in practice to develop or design a novel product, process or strategy that would benefit the local people in the village.

Apply human-centred design principles to develop or design a novel product, process or strategy.

We immersed ourselves in the culture and paid attention to the way the locals lived their lives and worked. In particular, at a farm we visited, we observed and took notes of their farming practices, identifying potential problems and opportunities, asking clarification questions and testing ideas with them on what kind of changes they were open to going forward. In the end, we developed a working prototype using local materials. It was easy to make, fix and replace and use. It reduced manual handling and increased safety, addressing a safety issue that the users didn't even recognise until we pointed it out.

The farmers were surprised and pleased with the idea and liked how easy it was to use. They took on the prototype for further development and implementation.

Intercultural Competence

Describe a situation in which you demonstrated cross-cultural competence by understanding, navigating and effectively interacting with a culture different to your own.

I was one of 35-40 students on a two-week study tour in southern India in February 2017. After 5 days of cultural immersion and exploration in the main city, we travelled out to rural villages and lived in homestays (in pairs) with Indian families for five days. The families spoke very little, if any, English.

Our task was to live with and learn more about the lives of the families - their way of life, their values, their hopes and dreams, their strengths and their challenges. We were practising empathic design as part of our study into how to be more effective and humanitarian engineers. We were tasked with understanding the families and their culture and developing a prototype engineering design that would address a challenge or leverage an opportunity for the family and/or community.

We were patient, open and respectful listeners whenever we interacted with any member of the community. We did our best to learn some local words/phrases and put ourselves in their shoes. We observed and took notes, asking questions and learning more every day. What might be useful, what might be helpful, what might be used, what might add value.

In teams of three, we developed an engineering design prototype and communicated this in 'skit' form to the community. My team's design addressed a manual handling safety risk on a coconut farm. It was made of a board and a nail - simple and intuitive to use and easy to replicate and fix. The skit was well understood and we received strongly positive feedback regarding our design and approach. We also walked away feeling like we had learned a lot about cultural interactions

(Company name removed) internship: transport planner

Hours claimed: 420 hour(s) as Engineering Work Experience
In this role, I was part of a joint-venture (JV) advising (company removed) in planning and designing Victoria's rail network. The JV was a team of 100+ and I worked in the Network Development team, responsible for planning and strategy.

Contact: (removed)

Position: (removed)

Phone: (removed)

Email: (removed)

SKILLS UTILISED:

Problem Identification and Solution

***** DEFINE YOUR OWN SKILL STATEMENT ***** Think of a situation or time that you would like to reflect on. Start the first "Situation" part of your reflection with the words "Describe a situation (or time) where "

Describe a situation where you had to consider data and circumstances in order to test assumptions.

We were working with a model and we needed to evaluate and if necessary, update input assumptions into the model.

I consulted with my senior colleagues to get ideas on available resources I could analyse to test the validity of input assumptions data. I then went about sourcing the information (online and from other colleagues) and analysing and testing the results. The process involved checking for data errors, anomalies and trends; cross-checking information between data sources and existing assumptions; and sense-checking the new data with colleagues.

I proposed new data that reflected what I believed to be the latest and relevant information for the model. With the information, I also proposed new insights about interpreting the model results, that were not relevant in the previous model update. The new data and assumptions I generated are now in use in the new model runs.

Intercultural Competence

Describe a situation in which you were able to work effectively with people of different ages, gender, races, religion or political persuasion.

On my current project, I work in a team of ~20 individuals from three different companies. There is a diverse range of ages (graduates to mid-level to 10+ year experienced professionals), cultures (Australian, Chinese, Indian, Middle-Eastern, English), gender and religious backgrounds. We all have to work together.

All my activities involve engaging with and working with diverse individuals, be they attending meetings, analysing results, writing up reports or other.

In extension to showing and working with respect, I have to be mindful of the communication styles of each person - especially if they are older and if English is not their first language. I have to be adaptable with how I receive and give information (in emails and in-person). There is a lot of give-and-take when trying to understand the other person and be understood so that we can best work towards a goal together.

Although it takes time, I feel very at-ease in my diverse team. There has so far been no conflict. Despite the

differences, we are able to work together and effectively. There are always new people coming in who we have to adjust to but I believe I have a strong basis for developing these relationships.

Communication

Describe a time you had to present complex information.

I was a junior transport planner in the Network Development Team, working across various projects simultaneously and contributing to many deliverables.

I was tasked with developing a Technical Advice Notice TAN regarding a large and specific area of the project. The TAN would be a summary and review of the background and existing information, a summary of current modelling and outputs, and recommendations going forward.

I worked within a framework of discrete tasks and objectives required of the TAN. Actions taken included reading and summarising existing documents, analysing modelling outputs on Microsoft Excel, creating maps on QGIS, working with other team members to interpret and validate the outputs, and presenting the outputs in useful and usable graphs and tables.

The result was a useful and usable TAN that was well-received by my supervisor and by the client. The information would inform discussions and key decisions regarding the next direction in this area of the project.

Professionalism

Describe a situation in which you needed to clarify and negotiate your work roles and responsibilities.

I worked part-time and the project was long-term (4+years) and complex (many individual projects within the engagement).

I needed to be aware of and up-to-date on key aspects of the project so I could find opportunities for me to contribute effectively to the project.

At the beginning, I discussed with my project supervisor my existing skills, the skills and areas I wanted to improve upon and explore with the project, my working days and availability, and my other commitments outside work (sporting, in particular). We negotiated what we expected from each other (level and type of communication, effort etc.).

We now have a strong working relationship and reasonably effective ways of finding ways for me to contribute meaningfully to the project. I also have relationships with others in the team who I regularly work with and who assign me various responsibilities in my role.

(Student Club), Monash Chapter: President

Hours claimed: 50 hour(s) as Non-Engineering Professional Development

(Student Club) Monash is Monash's local chapter of (Student Club) Australia. (Student Club)

Australia was started 10 years ago to promote the application of humanitarian engineering to alleviate social and environmental issues in local and overseas communities. The Monash Chapter runs a range of initiatives which members are able to participate in. This includes installation of green technologies across the Clayton campus to the computer co-op, which recycles computers to distribute to the needy. Individual members are also able to put forward and establish projects themselves. We also run a range of social events every semester such as trivia nights and other fun events. If you are interested in making a REAL difference be sure to pop-in during one of our many think tanks.

Contact: (removed)

Position: (removed)

Phone: (removed)

Email: (removed)

SKILLS UTILISED:

Planning and Organisation

Describe a situation where you developed a vision and a proactive plan to achieve it.

In my time as President, I ran annual committee weekend retreats for vision and planning purposes. This would occur at the beginning of the year, right before the start of Semester 1. The event built upon the very first retreat during my time as Vice President. The event was important for us to reflect and plan as well as to get to know each other better because we would often have different people in roles as the committee is re-elected every year.

Tasks included:

- designating a weekend for the event based on the committee's availability
- booking accommodation (Airbnb house away), organising transport and food budget
- developing and leading the agenda for the weekend: Chapter vision review; events calendar review; roles descriptions and goal settings; review of challenges and opportunities; review of budget; team-building activities
- preparing accompanying slide pack
- leading the planning sessions
- delegating tasks throughout the weekend
- supporting each team member

To make the most of our sessions I:

- put out several quizzes on team personalities/team roles, to learn more about how my team members preferred to interact in team environments and what their strengths and weaknesses might be
- I drew from existing vision, mission and values of the wider organisation and translated them to our local context
- I did my best to create an open environment - both here and during the rest of my term

We walked away feeling a lot more like a team, with a clearer vision and understanding of our individual and Chapter goals. It would give more certainty to our direction which would make the rest of the year more purposeful and would make decision-making easier down the track. Sure, plans might change but everyone always valued the retreats and newcomers especially. It's something I'm proud the Chapter continues to do.

Creativity and Innovation

Describe a situation where you had to improve or develop existing processes through creative and critical analysis.

Our Chapter's financial management system needed a change after we recognised that our continued growth depended on prudent financial planning and management. At that point in time, we had no way of budgeting or allocating finances between our projects (because our activities were never large enough). We only spent what we earned, without any concrete goal-setting or budget planning.

As President, I needed to work closely with the Treasurer to review existing processes and understand the existing financial position and requirements (as a chapter of a larger non-profit organisation) so as to improve the processes going forward.

We reviewed all documentation on financial sources and spending; worked with the higher level of the organisation to understand our financial reporting requirements; and developed a system and documentation (templates, forms) for our project leaders to propose budgets consistently and for our executive committee to review and approve such budgets. We focused on making the system easy to use, consistent, trackable and bias-free. My role was mainly to conceptualise the system and requirements and review the documents the treasurer developed.

As a result, the Chapter was able to move forward with a clear budgeting proposal and approval system that would allow it to keep track of its finances and ensure it was able to meet its requirements to Head Office. while growing. It was a great experience to learn more about financial reporting and budgeting. We were able to gain more confidence from our project leaders after being more transparent and clear with our financial system. We were also able to share our approach with other organisational chapters at the state's annual retreat that year.

(Company) Australia: National athlete

Hours claimed: 110 hour(s) as Non-Engineering Professional Development

I was a member of the Australian squad for (sport). This involved training commitments and participation at domestic and international competitions.

Contact: (removed)

Position: (removed)

Phone: (removed)

SKILLS UTILISED:

Planning and Organisation

Describe a situation that demonstrates your ability to organise and develop a system to facilitate your work.

Being a member of the Australian team whilst still studying full-time and working part-time was very challenging. I didn't want to reduce my study-load because I had a target time to complete my studies. I needed to work because I lived out of home and needed to financially support myself. And I didn't want to give up my (sport) passion. So I somehow needed to make it all work.

I needed to set up strategies to help facilitate all of my activities.

To organise and develop a system that would enable me to do all of my activities:

- I used and adhered to a calendar, documenting and allocating time to all my daily activities (including sleep, commute time, trainings, study time etc.). This helped me stay on top of what I had committed to doing and prevented me from over-committing
- I joined the Monash Uni elite student performer scheme, which gave me access to resources and a network of people that were in a similar position. Being a part of the scheme gave me flexibility with my uni assessments (special consideration) around times of competitions where I would be travelling a lot and time-constrained.
- I started seeing a psychologist, who helped me develop strategies to manage my mental health in the face of overwhelming pressures and deadlines.

Whilst it has been difficult and I needed a lot of people to accommodate (e.g. lecturers), I am proud to say that the steps I took helped me to achieve across the key areas of study, work and sport. I am soon expected to graduate, I continue to thrive at work and I was able to attend all of my sporting competitions.

(Company name removed) Internship: economic/strategy consultant

Hours claimed: 464 hour(s) as Non-Engineering Work Experience

Worked 3 months full time late, as a summer intern consultant at (removed) Consulting Firm.

(Company) is a small, boutique economic and strategy consulting firm with particular expertise in the water sector. Majority of the time spent working on a water-related economic project for the Department of Environment, Water, Land and Planning.

Contact: (removed)

Position: (removed)

Phone: (removed)

Email: (removed)

SKILLS UTILISED:

Communication

Describe a time you were expected to read and synthesize complex information in a way that was easily understood by others.

The nature of the project required analysis and synthesis of 100+ documents of varying complexities, similarities and differences. I prototyped and developed a tool to help with bulk and speedy analysis of the documents by multiple people and assisted with transforming this analysis into a report for the client.

Read and synthesize 100+ documents of varying complexities, similarities and differences.

I prototyped and developed a tool to help with bulk and speedy analysis of the documents by multiple people and assisted with transforming this analysis into a report for the client.

A more streamlined way of data analysis that everyone in the team could adopt and reasonably follow and a concise report (co-authored with others) which the client was satisfied with.

Professionalism

Describe a situation that demonstrates your ability to take responsibility for your own professional learning and development.

Entering a small consulting firm as their first intern, and for my first internship. No established internship program.

In the absence of an established internship program, there was no clear structure to my internship experience. I was 'thrown into the deep end' per se, which was valuable for my learning. I had to take charge of my experience and drive the regular check-ins to ensure both parties derived value from the experience.

Initiated meetings to clarify roles, expectations and coordinate regular catch-ups.

Better understanding of roles, expectations and higher levels of satisfaction for both parties. I felt like I was adding value and in turn felt like I was receiving value also.

Initiative and Enterprise

Describe a situation in which you were able to identify opportunities and potential pathways that were not obvious to others.

Client meeting

Listen, take in client feedback on project progress and make suggestions where relevant.

Suggested using an existing technology I was familiar with that hadn't been considered by the team to streamline the current approach to analysing the data for the project.

Client and colleagues were open to the approach and allowed me to pursue. The approach contributed to significant reductions in the time taken to analyse the data for the project, helping to keep project costs lower than before and to meet project deadlines.

(Company removed) Internship

Hours claimed: 240 hour(s) as Non-Engineering Work Experience

(Company removed) is the Australian body responsible for facilitating trade and investment

between Australia and other countries. The (Name removed) Memorial Scholarship was

established in 2009 to honour (Name removed) who passed in the Indonesian bombings whilst

supporting Australia's trade and investment agenda. It is awarded annually to a Monash University

student studying Engineering and Commerce.

At (Company removed), I supported the Infrastructure Team as an intern researching in the area of resilient cities, climate adaptation, and climate mitigation, to identify global drivers and trends, and derive insights on commercial opportunities for Australia. I worked out of the Melbourne office, coordinating strongly with colleagues in Sydney, as well as seeking feedback from colleagues in China, Indonesia and India. I had the opportunity to align personal interests with meaningful work, having the support of a network of (Company removed) professionals and opportunities to meet external parties. Adaptability was key in ensuring smooth transition mid-term when there were significant pivots in the project to align better with team objectives. The insight paper developed has served to provide context, trends and opportunities for further 'deep-dives', as well as actionable recommendations for (Company) to consider.

Contact: (removed)

Position: (removed)

Phone: (removed)

Email: (removed)

SKILLS UTILISED:**Communication**

Describe a situation where you were able to interact and build rapport with others in order to achieve a goal.

My internship was short-term (3 months part-time). Two months in, I went on holidays for four weeks. Upon return, I found my supervisor had moved on to a new role overseas and my new supervisor resided interstate. I also found my project scope had been changed completely despite the progress made to date.

I needed to adapt quickly to the new circumstances and start on the new project scope to ensure I could produce something meaningful in the brief time left.

I organised regular phone calls with my interstate supervisor and we agreed on a system of emailing that worked well with the both of us, ensuring she was across all my work and that I had the support I needed from her, whilst staying on track. Although we never met in person until the internship was over, we built enough confidence and rapport between us in our online and phone communication that we both succeeded in the internship.

I managed to complete the project on time, producing an insights report that was well-received by my supervisor and her team.

(Company name removed) internship: economic and strategy consultant

Hours claimed: 384 hour(s) as Non-Engineering Work Experience

Continuation of internship undertaken. Taken part-time during both semester 1 and 2 (16 hours a week), culminating in a minimum of 384 hours throughout the year, excluding semester breaks.

Contact: (removed)

Position: (removed)

Phone: (removed)

Email: (removed)

SKILLS UTILISED:**Problem Identification and Solution**

Describe a situation where you had to identify and solve a difficult problem.

I was a part of a small team tasked with helping a government authority develop a land and water management plan for a particular resource.

I supported the Project Manager and Principal in planning and conducting workshops with the client where we worked through strategies to identify the challenges and opportunities. I then helped to synthesise and analyse the outputs and translate them to a plan as part of the project scope.

In workshops, we undertook SWOT (strength, weakness, opportunities, threats) and PESTLE (political, environmental, social, technological, legal, economic) analysis to identify the problems that the plan would need to address. We took and analysed our workshop notes to identify and prioritise key areas for focus and then built our plan on this basis, with help from technical experts in the company.

I was able to learn about and apply specific problem-solving techniques to a project. We succeeded in developing a relevant plan which satisfied the scope and the client.

Teamwork

Describe a situation in which you able to contribute fully to the team effort and play an important role in the success of the team, without necessarily taking the lead.

I was assigned a project where I was a business case support author, working in a team with an interstate project manager (PM) and five technical leaders.

My task was to attend all site visits and workshops and work with the technical leads to gather, interpret and use the information to develop the business case.

I took notes at workshops, synthesised and shared these, supported the PM in project management tasks, and importantly, coordinated team inputs to draft the business case, under the lead author's guidance.

My role in coordinating the inputs and supporting the PM was critical to accomplishing the key project deliverable, the business case, which I drafted. This draft was then reviewed and improved upon by the lead author before submission. We received positive feedback and the business case would progress to the next phase, which was the larger aim. In future, I would allow more time for the lead author to review the draft and not try to create the 'perfect' draft.

Use of Tools and Technology

Describe a situation when your ability to learn and work with current technology contributed to a productive outcome.

Our organisation needed to better understand our key clients' future needs in a particular area so we could better position ourselves to meet them.

I was tasked with developing a technological tool that would forecast market activity and reveal future opportunities relating to our clients. Success criteria included a modelling tool that could be regularly updated and was easy to use, which would output estimates of timing and market value of opportunities. I owned the entire task, including regular communication with the functional team who would use the tool and the information, to better understand their needs from the tool. The outputs were summarised in a personalised slide-pack for each client which the team could use to communicate with the clients.

Key actions included:

- Developing a project plan and budget (hours, key tasks, project update frequencies and milestones)
- Acting on this plan
- Collecting information about the clients and their activities and the market in general. I used a combination of online secondary research and in-house primary research.
- Applying technologies to analyse the information and model the necessary information - a combination of Microsoft Access and Microsoft Excel. This involved making assumptions about the information and within the model.
- Prototyping the model and testing outputs with the team to sense-check the outputs and ensure the output formats were usable and useful.
- Summarising the outputs in a personalised slide-pack for each client which the team could use to communicate with the clients.

As a result, the team gained a clearer understanding of the future market value of opportunities (in \$) relating to specific clients. This enabled them to have more purposeful, evidence-based and proactive conversations with the clients which would translate to stronger client-relationships and more opportunities for the organisation.

Workforce Analyst: (Company removed) - 2016

Hours claimed: 353 hour(s) as Non-Engineering Work Experience

As an analyst, I worked with 8 others in the Workforce Analytics team, conducting regular and ad-hoc workforce-related reporting as well as support high-level strategic work. Outputs included revisions of old and development of new reporting tools to support evidence-based decision making for workforce planning and policy changes. A significant understanding of databases and analytics software was developed, as well as an appreciation of the large volumes and various types of data available and collected on different platforms. Well-developed critical thinking and sociological analysis skills were required to identify client needs and develop solutions. Example projects include analysis of women representation in STEM.

Contact: (removed)

Position: (removed)

Phone: (removed)

Email: (removed)

SKILLS UTILISED:

Use of Tools and Technology

Describe a situation when your ability to learn and work with current technology contributed to a productive outcome.

A key software our team used was Microsoft Access Database - a program I had never used before.

I needed to quickly learn how to use the software on the job so as to be able to provide meaningful contributions to the team.

I undertook the organised one-on-one training with a senior member on the team, as well as learning more about the software online and taking the time to practise applying it, including following provided documentation to produce work for the team.

I grew more and more confident each day and was able to not only follow instructions and use existing databases but also start creating new databases and queries myself to create reports. In many cases, this would warrant creating new instructions for the new reports. Since leaving this job, I have also been confident enough to use this

Student Name:

CPD Question 1: *Ethics and Professional Accountability*

Drawing upon your CPD experiences, provide an example for two of the following situations.

Part 1:

1. A situation where you had to consider your actions in terms of **ethical conduct**, specifically relating to the Engineers Australia Code of Ethics. **(250 words)** [Download the code here](#)

As an intern at an engineering consulting firm, I not only have the opportunity to gain industry experience but to tangibly deliver on projects for clients. With it, comes a responsibility to constantly draw and build on my skills so as to competently contribute, while acknowledging the limitations of my experience and knowledge at this point in time and not misrepresent myself where I do not have adequate knowledge. This involves always striving to learn (formal trainings, peer-to-peer learning, extra readings and explorations of the industry in my own time). It also involves admitting where I need help and guidance and where needed, others to step in until I have developed myself adequately.

A specific example is where I have recently led the writing of a technical deliverable on a project. With regards to the Engineers Australia Code of Ethics:

- Demonstrate integrity / Exercise leadership - Ensured I respected my colleagues and drew on their expertise, acting honestly and with humility
- Practice competently – Leveraged my strong analytical skills and learned additional ones from others, ensuring to constantly sense-check and review my work with others
- Promote sustainability – Acted in accordance with project scope and also with wider aims of environmental and social sustainability in mind (e.g. evaluation of results and generation of recommendations).

Maximum Words = 250

Part 2

(choose only 1 of the following situations):

- A situation where you had to consider whether **due diligence** had been applied in relation to risk management compliance.
- A situation where you had to consider the **safety of other people**.
- A situation where you had to consider **environmental protection concerns**.
- A situation where you had to recognise and address **intellectual property** requirements.

(250 words)

Scenario C

In delivering our final year group engineering project, we needed to consider and address the relevant environmental protection concerns. This involved undertaking an Environmental Protection and Biodiversity Conservation (EPBC) search on the area and working with the client to identify specific concerns / aspirations relating to the area. This expanded the considerations to flora and fauna that also held cultural and heritage significance. For example, regarding the protection of key local tree and bird species associated with local traditions and identity and the rehabilitation of a natural lagoon. In our proposed designs, we demonstrated our consideration of these concerns through:

- Avoiding locating features where trees were or if unavoidable, outline the need to develop and implement a tree re-location program
- Adopting environmentally-friendly designs (e.g. use of local materials, renewable energy sources, waste minimisation practices, water harvesting technologies)
- Considering indigenous practices

Maximum Words = 250

CPD Question 2: *Effective Communication*

Drawing upon your CPD experiences:

Part 1

Reflect on a time when you gave an **oral presentation**. Describe the audience and how you tailored your oral and visual communication to suit the audience. How effective was this method and what would you change in the future? **(250 words)**

As President of (Student Club) for 2.5 years, I often presented to audiences varying from 10 to 300 people as part of my role. One of these events, was a presentation to a lecture theatre of approximately 250 students. It was a start-of-year welcome event, and I was there to give an overview of the organisation, our vision, mission, objectives and initiatives available for students. Since the purpose was to inform and generate excitement (we were recruiting volunteers), I kept my presentation slides simple and eye-catching, with lots of relevant photos and graphics, complementing my speech. I spoke freely and without palm cards, engaging with the audience and doing an interactive online poll at the beginning to get the audience involved. I believe the method was highly effective in achieving the presentation purpose. In future, perhaps I could also consider the use of a video as visual aid.

Maximum Words = 250

Part 2

Describe and **contrast two different formal engineering written reports** that you have produced, in terms of their objectives, target audiences, writing style and structure. Comment on how each of these reports was appropriate for the intended purpose. **(250 words)**

The two different reports discussed are a lab report and a research report:

1. **Purpose:** the lab report documents the objectives, aim, method, results and discussion (under those headings) of an experiment conducted in-class. It is shorter than a research report and relates to a well-defined activity that is illustrative of a concept that is studied about in class. The research report instead focuses on expanding knowledge in a particular area and is longer.
2. **Target audience:** the lab report is generally for the lecturer / lab tutor, to demonstrate understanding of a concept; the research report is generally for the wider academic community.
3. **Writing style:** the lab report is instructive in nature and is brief. The research report involves more storytelling. The lab report is generally written in third-person whilst the research report can be written in either third or first person.
4. **Structure:** the lab report headings include introduction, aim, method, results, discussion and references. Research report structures differ depending on the type of research (E.g. literature reviews vary from review to review) however would include introduction (with aim therein), method, discussion (possibly under multiple thematic headings) and references.
5. **Appropriateness for purpose:** the lab report is intended to demonstrate understanding and document an experience of practising the application of a concept. The report's brief structure is appropriate whilst the headings guide the demonstration of understanding. In contrast, the research report is intended to advance knowledge and document the process undertaken. The longer structure and flexibility in headings means it can be adapted to each project and also contain sufficient information for the audience.

Maximum Words = 250

CPD Question 3: *Self-Management and Professional Conduct*

Drawing upon your CPD experiences, provide an example of **one** of the following:

Part 1

(choose only 1 of the following situations):

- A. A time where you had to **critically assess your professional performance** as an engineer (e.g. ability to analyse, judge and make decisions). What criteria did you use to self-review your engineering performance? How did this help to improve yourself as an engineer?
- B. A situation where you needed to **apply time management and prioritisation skills** to a project. What steps or decisions were needed to achieve the project requirements? To what extent did your project goals conflict with your personal goals/expectations? **(250 words)**

Scenario B

I needed to apply time management and prioritisation skills to my final year engineering group project. To achieve project requirements, our group took several steps, including:

1. scheduling regular meetings twice a week
2. setting up group communication channels
3. setting up a project plan, with task schedules and deadlines
4. rotating team leaders
5. discussing our private commitments with each other at the beginning so we were all aware of and could manage these better ahead of time.

Goals to complete the project conflicted greatly with my personal goals outside of the project, which included extensive commitments like playing competitive sport for Victoria and Australia; working part-time at an engineering firm; volunteering for (Sports Organisation); and studying a full-time semester which included my individual Final Year Project (FYP)). These all competed for my time to attend meetings and complete set tasks. In such times of conflict, I relied on my team members to step up (and importantly, vice versa where they were committed). At times, I had to renegotiate my other commitments and sleep. At times, it was challenging to adhere to our time management strategies we had developed (i.e. sometimes, we would cancel meetings). In the end however, we managed to band together and prioritise the project leading up to submission and delivered a more than satisfactory deliverable.

Maximum Words = 250

Part 2

Give **two examples of professional engineering societies** and reflect on the impact the professional bodies have on the engineering profession and the general society. How has this helped you to improve yourself as an engineer? **(250 words)**

Two examples of professional engineering societies are:

1. (Society #1) a multi-disciplinary society within Engineers Australia that takes a holistic approach to sustainability
2. (Society #2) professionals who work to improve mobility and safety for all transportation system users and help build smart and liveable communities

I feel that professional bodies play a key role in acting as a platform for those working in the specific discipline/s to:

1. establish and maintain relevant qualifications
2. network and build professional working relationships
3. develop technical expertise via courses, seminars, workshops, panels, conferences etc.
4. stay up to date with new knowledge and trends in the industry

I've personally benefited from events (Society #2) have held locally in Melbourne, including forums and social networking events. I was introduced into (Society #2) by a mentor in the sector who happened to volunteer on the committee. For me, (Society #2) has helped me be a better engineer both technically and socially. In general, it is also comforting to know there is a 'home base' filled with people of many and various experiences and a passion to develop the field.

Maximum Words = 250

CPD Question 4: *Innovation and Creativity*

Drawing upon your CPD experiences, provide an example of **one** of the following:

Part 1

(choose only 1 of the following situations):

- A. A time when you used **creative or innovative approaches** in either a technical or non-technical context;
- B. A time when you **assessed or systematically evaluated** a new development within the field of engineering;
- C. A time when you **engaged with professionals** from outside your field of study to increase your awareness of broader issues relating to STEM and/or the business environment. **(400 words)**

Scenario A

On a project, a team of three of us were tasked with a review of numerous (100+) legal documents of varying complexities, formats, lengths and age. The purpose was to review and compare each document to determine similarities, differences and opportunities for consolidation. As such, the process needed to be thorough. However, the project budget was tight and we therefore we found we couldn't afford to spend the time we did on the sample documents on all of them. I identified there was an opportunity to streamline the process using a custom-built Google Survey that we could use to input and catalogue information consistently regardless of who was doing it. It would also allow us to complete the task at a much faster rate than before.

I pitched the idea which was well received and then designed and built the form and taught my colleagues how to use it. The tool allowed us to save a lot of time and money on the project budget, which was recognised by the project manager. It was also well received by the client who felt it demonstrated innovation on our part to use technology this way on the project.

Maximum Words = 400

Part 2

Reflect on how and why the example you have selected is evidence of your creative, innovative and pro-active demeanour. **(100 words)**

The above example highlights my ability to recognise challenges and opportunities and to take initiative to assess feasibility and applicability quickly and prototype and pitch ideas to others. We were not specifically asked to consider other alternatives or come up with ideas but I went ahead nonetheless.

Maximum Words = 100

CPD Question 5: *Management of Information*

Drawing upon your CPD experiences, provide an example of **one** of the following:

Part 1

(choose only 1 of the following situations):

- A. A time when you located the information you required via a systematic search of multiple sources (both online and physical).
- B. A time when you critically assessed the accuracy, reliability or authenticity of an information source and found it inadequate.
- C. A time when you utilised document identification, tracking, naming conventions and/or version control procedures. **(400 words)**

Scenario A

As part of a bigger deliverable, I conducted an audit of select stations on Melbourne's rail network. We were limited in our ability to enter the sites and relied heavily on datasets from multiple sources, online and via Requests For Information (RFIs) to the client. My systematic search consisted of:

1. Defining and agreeing with the client and other teams on the purpose and scope of the audit to ensure it would gather the necessary and relevant information going forward
2. Online sweep of all publicly available information on government department and operator websites (e.g. PTV, Metro, V/Line, VICTrack), including on public government databases (e.g. data.vic.gov.au), focusing on key words and related words. This included data in reports, on webpages, in GIS shapefiles, in spreadsheets, on digital dashboards etc.
3. Assessment of reliability of sources (gaps, currency) and submission of RFIs
4. Collating all the information, recording data source, date, assumptions and any caveats – using appropriate version control measures, saving files in a logical folder structure in the virtual project folder
5. Drafting an audit template for review and feedback, noting gaps to be filled in once RFIs received (especially getting feedback on data format and usability)
6. Receiving the RFIs and completing Steps 3-5.
7. Continuous drafting and review until a final submission is complete and can be added as an input and appendix to the larger deliverable.

Maximum Words = 400

Part 2

Reflect on how and why the example you have selected is evidence of your professional use and management of information. **(100 words)**

The above example shows how I am deliberate with my search for information. This is important given finite time and budget, in particular. It was important to define the intent and acknowledge the limitations of the exercise while also working with others to get new information that may otherwise be unavailable. It was also important to document and store the information so others may access it, and record and present it with all the relevant caveats and assumptions so others can apply the information appropriately. This is illustrative of professional use and management of information.

Maximum Words = 100

CPD Question 6: *Being an effective part of a Team*

Drawing upon your CPD experiences, provide an example of **one** of the following:

Part 1

Describe a time when you were part of a project where there was conflict within the team and reflect on:

- Your role within the project team.
- How did you accommodate varying personality types and gain the trust of your peers & team members.
- What did the team do to resolve the situation.
- What you would do differently in the future and why.

(500 words)

There was a particular experience as a member of a student project team where there was a conflict arising out of a lack of engagement and communication by some members of the team, associated with a lack of timely completion of designated contributions to the project. It was causing other members to become frustrated and annoyed. As team leader of Stage 2 (of 2), I spoke with other members who were affected and felt the best initial course of action was to check in with each person and then reiterate the expectations of the team and the commitment we had all made to each other at the beginning of the project. We then brought this into our next team meeting to discuss openly, calling out behaviour that was not acceptable and needed to be addressed. Those who had caused some angst quickly apologised and explained their individual situations, and even asking for some support from others. This was helpful as it enabled us to see each other's viewpoints and where we could make the situation better. For the most part, people just needed a little more time than was agreed but hadn't communicated it. This was particularly evident for members where English was their second language. In the end, we were able to listen and empathise as a team and negotiate our roles in completing the tasks. There was a need to negotiate some expectations of the output quality (given the timeframes) which was a bit challenging for some to accept including myself. However, we were able to produce an output that we were satisfied with and which met task requirements, which was the main objective.

In future, I will try to check in earlier with individuals to identify issues and struggles we can proactively manage ahead of time. Although we had set out at the beginning of the project to create an open environment where we could communicate freely and share this, it had obviously deteriorated over the course of the project as people (including myself) got busier with commitments/project. I will also need to highlight and encourage more frequently the importance of and different ways to communicate (with myself or each other). In this situation, I needed to more closely manage people than I generally would, which is a learning about tailoring my leadership style to individuals, even if others in the team suit my preferred approach.

Maximum Words = 500