Link to ePortfolio: danielosmond.me

About Me

Hi, I'm Daniel a second year Engineer majoring in Data Engineering.

The first question I always get when I tell people I'm doing Data Engineering is what is Data Engineering?

At its core Data Engineering is the study of collection of data, data transmission and storage, and the manipulation and understanding of data.

I normally then get asked, what does that actually mean though?

I make the programs that create and collect data from the world around us.

I make the software and networks that send and store that data.

I do the analysis to find trends and correlations within the data.

Why did I become an engineer?

I became an engineer as I was always fascinated about how things worked. As a child I was forever pulling apart old computers and VCRs to look at their inner workings (and not putting them back together again much to my mother's dismay). To this day I still find that understanding how things work is the best way to learn, whether it be cars, buildings, computers, or even programs, learning about how and why things are the way they are is a great way to increase engineering knowledge.

What do I think engineering is?

I believe that engineering is a subset of problem solving with the aim of reducing the impact of a real world issue. As such, I also believe that an engineer doesn't need to know everything, they just need to understand how to solve the problem and finer details can be learned from resources such as manuals, standards, and guidebooks.

E.g. A software engineer wishes to develop a system to read a database file, and display a sorted version to the user

To achieve this, the engineer only needs to know three basic tasks, implementation and specifics can be re-used from existing examples:

1. The database must be loaded into the program's memory

2. The database must be sorted

3. The database must be displayed

The ability to break down complex problems into smaller, easier steps is the role of an engineer, as this is a key part of the problem solving system.

Education

University of Technology Sydney - Bachelor of Engineering (Data) (Honours) & Diploma of Professional Engineering Practice (January 2018 - December 2022 (Expected))

Ryde Secondary College - HSC - (January 2012 - December 2017)

Team Skills

Ability to communicate complex technical ideas and concepts with those who have little or no technical background

Experienced in acting as a go-between for customers and other staff

Technical Skills

Programming Languages: C, Python, HTML, CSS

Databases: SQL and Microsoft Access

Word Processing: Microsoft Word, Adobe Acrobat and Nano

Operating Systems: Windows (XP, Vista, 8(.1), 10), Mac (OSX), Linux (Ubuntu, Raspbian)

Analytics: Excel, MatLab, MiniTab and Knime

Prior Experience

Research Engineer - University of Technology Sydney

Student Promotions Representative - University of Technology Sydney

Customer Care Associate - Big W, Top Ryde City

Work Experience - Toshiba Asia Pacific, Macquarie Park

Personal Interests

Soccer - Club Level

Computer Assembly

Trumpet - Member of High School Jazz Band

Cooking

SMART Development Goals

|  |  |
| --- | --- |
| What do I Want to learn | Additional programming languages, such as C++ and JavaScript |
| How can I measure progress | Websites such as codeAcademy offer a % complete score, as well as a digital certificate upon course completion |
| Am I capable of achieving the goal | I believe that I am capable of completing this, as I have done so previously using codeAcademy, and I also have some minor previous experience with these programming languages |
| Benefits? | The overall benefit of this increased programming skill would be to improve my versatility, thereby improving my employability |
| Timescale? | There is no overall timescale for these tasks, however assuming they take as long as similar previous codeAcademy tasks did, I believe that each one will take around a month, assuming I work ~5 hours a week on each course |

Learning Journal

List of Entries

Professional Assessment Activity 1

Professional Assessment Activity 2

Subject Learning Objectives

Elective Learning Journals

Entry 1 - Understanding of Capital

Entry 2 - Careers Fair

Entry 3 - Critical Incident Summary

Professional Assessment Activity 1

15/02/19

The purpose of Professional Assessment Activity 1 is to allow students to practice giving and receiving feedback, as well as allowing them to checkpoint their progress on their ePortfolios. In our activity group members went in order receiving feedback from other group members, demonstrating what they thought could be improved upon on the actual ePortfolio where possible.

All included feedback is in the attached PDF, however there were only a few items that were absolutely critical in order to improve the quality of my ePortfolio:

Making my resume easier to access

Increase the overall detail level, especially in terms of the “About Me” section

Improvement of subject headings

Inclusion of all necessary sections

Although not all of these tasks were 100% completed by the end of the week I felt that it was important to at least begin to address them, as I find it makes it easier to continue on later with an outline, rather than down the line having to go back and figure out what everything meant. The issues were addressed as follows:

Resume was converted to a single PDF, rather than having a zipped folder with resume, transcript, and references.

Detail was first improved in new additions to the portfolio, then later on was improved in existing entries.

All subject headings were added, regardless of if there was content to put under them, subject headings that did have entries had additional detail added to them in order to indicate what they were.

By the addition of all subject headings in point 3, it became easier to see which sections were present, and which still needed to be worked on (although not all were needed to be completed at this point).

I feel that this was an extremely beneficial task for the most part, as people tend to fixate on smaller things within the task at hand, which can cause them to miss out or neglect other areas. This tunnel vision can be countered by a fresh set of eyes that do not have any prior exposure to the work that has been done. This is especially important in assessment tasks, as failure to include all necessary sections can result in significant mark loss.

While taking on feedback can be difficult, especially if both parties are not on the same page about what is expected, it is important that both parties are able to come to some form of agreement as to the severity of the problem raised, and what a viable solution would be. I attempted to achieve this in the group activity by using the Positive-Improve-Positive or “Feedback Sandwich” method, as described in Feedback Sandwich (Bow Valley College, 2013), however this did not entirely stop disagreements from occurring. I feel that these difficulties came fom a differing understanding of what was expected of us for the assessment.

I feel that in order to maximise what everyone gets out of this activity it is best that everyone has defined what they believe to be important for the assessment/ePortfolio in terms of content and quality, with the group coming to some form of consensus on this as an overall marking baseline. Additionally team members should make their ePortfolios available as early as possible in order for proper time and consideration to be given for each ePortfolio. These are things that I will discuss with my group mates when we next meet.

Photo of the Group

Assessment Activity Worksheet

Bow Valley College 2013, Feedback Sandwich, videorecording, Youtube, viewed 02 February 2019, https://www.youtube.com/watch?v=NO34pZvCg\_s

Professional Assessment Activity 2

01/03/19

Professional Assessment Activity 2 is completed in much the same way as Professional Assessment Activity 1, however slightly more advanced ePortfolio requirements are assessed, as well as checking to see what changed and improvements have been made since Activity 1. Group members recieved feedback from other members of the group, one at a time, using examples from the ePortfolio where possible.

All included feedback is in the PDF, but I have made a list of the most important points, and how I am to address them before the ePortfolio is submitted for marking:

More reflective Assessment Activity 1 entry

Complete all necessary learning journal entries

More information on the landing page/about me

References for texts cited in entries

For the remaining week before the ePortfolio assessment is due, I will be working towards completeing at the very least, these four points, as based on my teammates’ feedback, I judged them to give the best quality improvement to my ePortfolio for the time that they would take to complete. My methods for completing them were as follows:

Attempt to better demonstrate the feedback given in Assessment Activity 1, and show how I addressed this feedback in order to show the method that I used to reflect on the assessment.

This would be completed as part of continuing the journal entries, but I felt it was necessary to include as it would help me to stay on task, and not focus on less important points within the ePortfolio.

The inclusion of more information would only be part of this, I think it will also be necessary to change the ordering of the paragraphs in order to tell more about me, and to make the page seem less like a CV (although the inclusion of that information is still important, as not everyone will read my resume).

Texts referenced in the ePortfolio entries will be referenced according to the UTS Harvard Formatting.

This task was very useful to me, as it allowed me to compare my ePortfolio to my teammates’, which helped me to see which areas that they had perfomed well in, and how I could possibly improve my work based on their ideas (i.e. how they understood/addressed questions, writing techniques). This frame of reference given by my teammates work was beneficial as it helped me to understand the level of quality and detail that we were expected to achieve for this assessment task.

The overall presentation was done identically to that which my group used for Assessment Activity 1, with the Feedback Sandwich method (Bow Valley College, 2013) being utilised in order to soften the impact of any negative feedback. Overall I felt that this time we got into the feedback faster and that the quality of the feedback was much better. I also felt like we had each gained a better understanding of the level of quality that each person was working towards, and aimed to give them feedback that assisted them in getting to that level, rather than providing them with information and techniques that were not going to be utilised by them.

Photo of the Group

Assessment Activity Worksheet

Bow Valley College 2013, Feedback Sandwich, videorecording, Youtube, viewed 02 February 2019, https://www.youtube.com/watch?v=NO34pZvCg\_s

Subject Learning Objectives

03/03/19

Objective 1 - Articulate Preparedness for Participating in an Engineering Workplace

The reason the ability to articulate preparedness for participating in an engineering workplace is deemed to be important is twofold:

Articulate - The ability to articulate ideas is especially important in the workplace as without it a student will find it extremely difficult to contribute as part of a team.

Preparedness - The preparedness to participate is also an important part of working as a team, as the inability to participate would mean contributions were never seen or heard, regardless of their value or importance.

These were achieved in this course through the use of the pre-reading tasks as well as the in class tasks in that students had to derive their own answers for the questions given, while simultaneously working to convey those ideas to their audience, in this case their class peers. Additionally, the inclusion of the Assessment Activity Tasks worked to combine these two points such that the students had to be prepared to participate in the group feedback session in order to get the most out of it, as well as being able to articulate their ideas to their groupmates in order to give valuable feedback.

Objective 2 - Document and Communicate their Capabilities to Contribute to a Workplace and Engage in Workplace Learning

The ability for a student to document and communication capabilities to contribute to a workplace and engage in workplace learning plays an important role in the job application process, as contribution and workplace learning are key “soft skills” that employers want from students. Documentation and capability communication can be broken down as the core skills of:

Documentation - Documentation is an important skill to have not just in the workplace, but life in general. It is especially pertinent to the workplace in that it gives a record of what was done and when, something that is beneficial in both time management and dispute resolution.

Communication of Capabilities - Communication of capabilities is especially important in the job market and when applying for promotions and extra responsibilities, as it is skill in this area that allows you to put your best foot forward when applying for new roles and allows you to stand out from other applicants.

These core skills were achieved through the use of the ePortfolio, as well as through the Resume writing task. The ePortfolio was mainly used as a method to document knowledge gained and activities done throughout the course, with learning log entries not only serving as a way for students to document what they had done, but also reflect. The Job Market Analysis section of the ePortfolio was utilised in order to gain information about the job market in general, mainly the types of roles that were open, who was recruiting, and what sort of applicants they wanted. Knowledge of these factors is especially important when applying for jobs, as applying for a job that clearly wants someone with a different skillset is only going to waste your time when you could instead be applying for something with a much higher likelyhood of success. Additionally, the resume writing task further helps to improve on the communication of the student’s capabilities as the recruiters will only look at a resume for a few seconds, meaning that only the most important information is needed, and that information must be easily accessible.

Elective Journal Entries

Entry 1 - Understanding of Capital

01/02/19

Week one was spent familiarising myself with the subject and what is expected throughout. It also included learning about the other members of my activity group, which I feel is important as it is our group members who will be giving feedback and constructive criticism on our resumes before assessments, and as such understanding their background and what they expect to get out of the subject is important as it shapes what responses they will give you on your work. Additionally it allows you to shape any feedback you have to give to them, in order for it to not be taken in the wrong way. I found the idea of the different types of capital to be interesting as the majority of people tend to think about what they believe they are worth, and what a company or job can do for them. While this is important, what you bring to the company and what the company believes you are worth are more important (human capital), as the company is the one who gets to decide who is hired and who is not. An individual must use their access to the other types of capital to help improve their percieved worth to a company (i.e. cultural capital can be slightly improved through the way that you dress, carry yourself, and interact with others), or to help gain opportunities that they may not have otherwise (i.e. social capital and your professional and personal networks can be used to find out about roles that may not be promoted as being vacant or hiring).

These different types of capital all play into the development of an “engineering identity”, falling under the umbrella of “navigating the formal and informal pathways into the profession”, as described in Schell, W. & Hughes, B. 2017. This does however show that while the different types of capital are important to an engineer’s career, especially in terms of finding employment, they are not the be all and end all of an engineer’s personal development. An engineer should aim to be continually developing not just their capital, but their engineering identity as a whole, whether that be from learning new things, learning about opportunities within the field, or by gaining recognition from their peers.

Schell, W. & Hughes, B. 2017, ‘An Approach to Understand the Role of Identity in Engineering Leadership’. 2017 American Society for Engineering Education Annual Conference and Exposition

Entry 2 - Careers Fair

08/02/19

In order to learn more about the career paths available to me I attended one of the STEM Careers Fairs organised by UTS Careers in Building 1. As this event was more focused on pathways for students nearing graduation, I used it as a way to find out what companies were employing young engineers, as well as what sort of engineers they were looking to employ (in terms of technical background, as well as experience and personality).

I also collected some information booklets and brochures from the businesses attending, however very few of the companies were looking for my skillset, and even fewer still were looking to talk to someone with so many years left in their degree (one of the representatives literally tutted at me and proceeded to ignore me).

Although I was unsuccessful in finding any industry contacts, I still found the event useful as it helped me to find out what positions existed within the industry, and the types of companies that were hiring. it also gave me insight into the sorts of tasks that engineers perform as part of their roles, such as System Admins deploying virtual machines for their clients.

Comment on social media: Although social media is prevalent throughout the industry, and has its place in networking with contacts and potential employers, there is a risk associated with putting yourself out there. This can include disqualification form job applications due to offensive or inappropriate posts, coworkers finding information you would prefer to keep secret, or your boss seeing every time you’ve complained about them or your job. Social media is a powerful tool if used correctly, however care and consideration must be taken in choosing what you post, and who can see what you post.

Career Fair Goodies

Entry 3 - Critical Incident Summary

22/02/19

At the factory a close family member works at there was a severe safety incident in which a contractor unfortunately lost his life and another two people were injured.

The contractors arrived on site to perform maintenance and cleaning on an industrial mixer. Before commencing work the contractors checked with staff on site to ensure that the equipment was correctly locked and tagged out in accordance with standard operating procedures in the event of maintenance needing to be performed. One of the on site technicians assured them that the equipment was disabled, however this was not actually the case. Although it is not yet entirely clear as to where negligence occured, it quickly became evident that the electrical supply to the mixer had not been disconnected and tagged out. This particular mixer was fitted with a system that automatically started operation of the system once weight was detected inside the mixer (with the assumption being that something to be mixed had been added to the system). This meant that when that one of the contractors entered the mixer to begin maintenance, the mixing blades began to spin, severely injuring the first contractor. The second contractor then climbed into the mixer in order to assist the first contractor. This resulted in the second contractor also sustaining injuries, while the first passed away due to his injuries. The third contractor then attempted to pull the other two contractors out, and was dragged into the mixer, resulting in him also sustaining injuries. The machine was only stopped when a staff member who worked with the mixer pressed the emergency stop. The contractors were only able to be removed from the mixer once emergency services arrived on site.

Critical Incident Questions:

Who are the participants?

Members of staff from the company, the contractors, emergency services.

What was critical about this incident?

This incident was critical due to the loss of life, serious injury, and failing of safety protocols and how we can learn to prevent things like this from occuring in the workplace.

How was the confidentiality of the participants protected?

Although this incident was highly publicised at the time of occurance, with the events that unfolded and names of those involved being public knowledge, in this summary no names of companies, individuals, or specifics as to the type of work occuring at the factory were used. This is important as to the best of my knowledge the results of the SafeWork inquiry have not yet been published.

What can be learned from this critical incident? Why is it significant?

The main point that can be learned from this critical incident is to not take shortcuts and make assumptions with safety. Although trusting others and what they say is important, it is much better to come off as slightly rude and be safe, rather than be involved in an event such as this. In this case this could have been achieved by the contractors inspecting the system to ensure that it was correctly disabled. Another factor in this incident was that neither the second or third contractor knew of the location and operation of the emergency stop system, which is why it took so long for the system to be stopped, and why all three of the contractors ended up being injured. This is significant as as an engineer there is the potential for you to be involved in the safe operation of equipment, and in the safety sign-off process. This involves the correct procedures and methods to be followed, as well as the familiarisation of appropriate safety and rescue technologies.

An understanding of safety in the workplace, and why it is to be followed is extremely important as events such as these affect more than just those directly involved, but their families and coworkers.

Job Market Analysis

Entries

Star Entertainment Group

IBM Australia

Cisco Meraki

Advertisment One: Star Entertainment Group

Star Entertainment Group is the casino, hotel, and events side of the now demerged Tabcorp Group. They are most well known for their operation of The Star Casino in Pyrmont.

Star Entertainment Group employs software and cybersecurity engineers in their cybersecurity division, which aims to help prevent the unauthorised access of their confidential client information.

This is the type of work I would be interested in due to my interest in cybersecurity, as a place such as a hotel and casino is extremely likely to come under cyber attack, and is also able to afford the latest technology in terms of their cyber security systems.

Applications for the Cyber Security Internship are done through Star Entertainment Group’s website

Star Ad

Example Cover Letter

PDF Cover Letter

Advertisment Two: IBM Australia

IBM is a multinational technology company offering infrastructure, software, and cloud compute solutions.

Recent projects in Australia include the migration of Mitsubishi Motors Australia to IBM Cloud. This use of IBM’s cloud services allowed for higher uptime, as well as increasing scalability due to the system being hosted in the cloud.

This is the type of work I would be interested in due to my prior experience with cloud (AWS) and SaaS (SAP) systems, as well as the physical infrastructure and networks that allow these systems to function and maintain their high uptime.

Applications for the IBM internship program are done through both indeed and IBM’s own website.

IBM Ad

Example Cover Letter

PDF Cover Letter

Advertisment Three: Cisco Meraki

Cisco Meraki is a multinational technology company specialising in networking/telecommunications.

Recent large scale projects that Cisco Australia has worked on include network infrastructure for Optus’ Commonwealth Games Digital Platform. However Cisco also supplies infrastructure and technologies to small and large businesses across Australia.

This is the sort of work I would be interested in due to my personal interest in networking. I also believe that working at a multinational such as Cisco Meraki would be interesting as there is the potential for working alongside overseas teams, bringing in people with vearied backgrounds.

Due to Cisco Meraki being a large company, the majority of recruitment is done through their HR department and Jobs Portal, although there is a potential employee social network/messageboard in the form of the We Are Cisco Blog. Cisco Meraki has advertised current internships on UTS CareerHub, which are approved by FEIT.