**Industry Data**

**What are the Job Titles for your group's ideal jobs? How do each of these rank in terms of demand from employers?**

The ideal jobs of the six group members most closely align with the titles of I.T Support Officer (Mason), Cyber Security Consultant (Amer), Software Engineer (Simon), Full Stack Developer (Roshan), Test Analyst (Joanna) and Service Delivery Manager (Motiana). Using the dataset provided by Burning Glass Technologies demonstrating the number of positions advertised under each job title from 2017-2018, it can be seen that out of 201 possible job titles, Test Analyst ranks at number 11, Software Engineer ranks at number 12, Full Stack Developer ranks at number 18, Service Delivery Manager ranks at number 19, Security Consultant ranks at number 81, and I.T Support Officer ranks at number 112. It is worth noting that several positions had other job titles which, it could be argued, would be considerably similar, however the titles which most closely matched the positions our team members had selected were chosen. As an example, Solutions Architect was the number one job title in postings for this period, .NET developer was number 3, and Front End Developer was number 5, all of which overlap Simon and Roshan’s positions of Software Engineer and Full Stack Developer. On the contrary, it was noted that the position of Scrum Master or Agile Lead was not included in the dataset, and so Service Delivery Manager was chosen as the closest matching alternative.

From your group's ideal jobs, you can identify a set of skills required for these jobs (we will refer to this as your group's required skill set). These can be divided into general skills (communication, problem solving, writing etc) and IT-specific skills (JavaScript, SQL, etc).

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| **Ideal Job** | **Aligns with what job title?** | **General Skills** | **I.T**  **Skills** |
| Geek2U Field Technician (Mason) | I.T Support Officer | Troubleshooting, Communication skills, | Technical Support, Microsoft Windows, Macintosh OS |
| Cyber Security Consultant (Amer) | Security Consultant | Multi-tasking, time management, organisational skills, Presentation skills, Leadership, Project management, Building relationships | Technical support, Microsoft Windows |
| Software Design Engineer (Simon) | Software Engineer | Problem solving, verbal and written communication, Detail oriented | C, C++, Java |
| Senior Full Stack Developer (Roshan) | Full Stack Developer | Teamwork, time management, verbal & written communication, problem solving, organisational | C# .NET, NET MVC, JavaScript, React, SQL, WCF, WPF |
| Test Analyst (Joanna) | Test Analyst | Verbal and written communication skills, interpersonal skills/, Quality Assurance and Control | HTML/CSS, JIRA, BrowserStack, CI/CD tools, Selenium, Agile development, Git, Powershell/C#/Python/JavaScript,MSSQL), |
| Scrum Master (Motiana) | Service Delivery Manager | Leadership, Team Building, Project management | Confluence, JIRA, Knowledge Agile frameworks,  Scrum Master/Product Owner/Agile Coach certification, |

**How do the IT-specific skills in your required skill set rank in terms of demand from employers?**

Our group has a very broad range of required I.T skills and this poses a problem in that as a group, certain skills are over-represented whilst others are under-represented. Thus, the unique requirements and nuances of the individual positions should be taken in to consideration by group members when they reassess their opinions of their ideal jobs. We can however make some observations based on skills that most frequently appear in the ideal job descriptions (required skill set) and that also appear in the skills in greatest demand dataset provided by Burning Glass Technologies.

Knowledge of Microsoft Windows features heavily in our required skillset and this ranks at 4th place in in-demand skills, represented in 8% of job postings. To give that figure some context, SQL was the highest ranking in-demand skill, sitting at 11%, though only one group member had SQL as a required skill. JavaScript ranks second highest at 9%, followed closely by Java in third place, also at 9%. Technical support, which is a requirement for two of our group member’s jobs, ranks at 5%. Programming languages C# and .NET accounted for 5% and 4% of postings, respectively, while C++ came in at 2%. Knowledge of Scrum methodologies ranked at 3%, while JIRA sat at 2%, and Selenium 1%. An analysis of job posting data by Indeed (The Skills Needed to Work in Australia’s Tech Sector Are Changing Rapidly, 2020) has shown the top skill required in postings in the March quarter of 2018 was Agile software development, at 34%, which most related to the job title of Full Stack Developer. The next most popular skills required were JavaScript (29%) which most related to Front End developer titles, Java (22%), .Net (20%), HTML (19%) and CSS (19%).

**How do the general skills in your required skill set rank in terms of demand from employers?**

The general skills in our required skill set predominantly consist of verbal and written communication skills, followed by problem solving, troubleshooting, team leadership, time management skills, and organisational skills. This seems to be an accurate representation of industry demand given communication skills rank most highly in terms of general skills desired by employers, with 31% of positions posting this as a required skill. It was noted that this skill was not technically listed as a requirement in Motiana’s ideal job, though, it could be speculated that employers would assume an experienced Scrum Master has effective communication skills due to the highly people-centric nature of the role. Problem solving, organisational skills and writing ranked the next highest in terms of demand from employers, each being a requirement in roughly 11% of postings. The next highest-ranking skill in the group’s required skill set was troubleshooting, which appeared in roughly 8% of job postings. Following that were leadership and time management, which were each represented in approximately 3% of job postings.

**What are the three highest ranked IT-specific skills which are not in your required skill set?**

The three highest ranked I.T specific skills which are not technically a part of our required skill set are LINUX, Oracle and ITIL, though it is worth noting these specialised skills were only mentioned in 5%, 4% and 4% respectively of job postings. In relative terms, these do not rank particularly high, given the highest-ranking technical skill was knowledge of SQL at 11%.

**What are the three highest ranked general skills which are not in your required skill set?**

The three highest ranked general skills not already in our required skill set are research, creativity, and mentoring, which ranked in at 10th, 11th, and 15th place. The low rankings of these skills and the fact they do not appear as requirements in our group’s ideal jobs suggests these skills are genuinely of less demand in the industry.

**Having looked at the Burning Glass data, has your opinion of your ideal job changed? Why or why not?**

The analysis of the burning glass data has revealed that demand in the tech industry is leaning towards favouring programming knowledge, effective communication skills and problem solving skills, and that Solutions Architect and Software Developer roles represent the greatest number of required positions. This has changed Joanna’s opinion of her ideal job as Test Analyst in that, although ranking well overall in postings, it does not require proficiency in many programming languages, and so seeking a role utilising the top 3 most in-demand technical skills of SQL, JavaScript and JAVA (e.g. software developer) may be a more viable long term plan. Amer felt his ideal job as a Cyber security consultant had key responsibilities which were similar in nature to those of a Solutions Architect. These included delivering both operational and strategic solutions, as well as hands on involvement in delivering client focused, customised, and integrated cyber security solutions. After having viewed industry data for the top IT job Titles, he realised that Solutions Architect was listed at the very top, and this re-enforced his beliefs and passion for his chosen job. He also recognised that hands on involvement with clients and delivering customised solutions would involve active engagement with a variety of stakeholders, which would require effective communication skills. Given that communication was listed as the greatest generic skill in demand for IT professionals, and that he considers communication and people skills to be his key strengths, he felt his views of his chosen field of study were strengthened and his passion for the role was reinvigorated.

Roshan also felt his opinion of his ideal job as web developer did not change after reviewing the industry data. The statistics reaffirmed his beliefs that the skills are highly in demand and will continue to be so, particularly with the trends in business to use social media as a key marketing platform, as well as replacing traditional desktop applications with web based applications. Simon similarly felt his opinion of ideal job as software design engineer did not change, despite knowing a significant amount of study would be needed. This was because the skills required for his role essentially topped the lists of in demand skills, which included C, C++, JAVA, communication, and problem solving. Motiana and Mason also felt undeterred after reviewing the industry data, given they had both already dedicated time to gaining the skills and knowledge needed for their particular roles, and that these were very much long-standing pursuits for them.