Industry Data

Mark George Industry Data
Cyber Security

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

Victor: Multimedia Specialist and Web Developer
Matthew: Data Scientist
Kanav: Cyber Security Operations/Engineer
Connor: Computer system analyst
Quentin: Software Engineer
Mark (myself): Cyber Security Specialist

From the "Top IT Job Titles March 2018" pdf file.
1. Software Engineer
2. Web Developer
3. Computer system analyst
No statistics on Cyber Security or Data scientist

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.).

Multimedia Specialist and Web Developer:
- Writing computer programs for various purposes.
- Using logic and reasoning.
- Analysing product requirements to create a design.
- Giving full attention to what others are saying.

Data Scientist:
- Statistics.
- At least one programming language – R/ Python.
- Data Extraction, Transformation, and Loading.
- Data Wrangling and Data Exploration.
- Machine Learning Algorithms.
- Advanced Machine Learning (Deep Learning
- Big Data Processing Frameworks.
- Data Visualization.

Cyber Security Operations/Engineer/specialist:
- Problem-Solving Skills.
- Technical Aptitude.
- Knowledge of Security Across Various Platforms.
- Attention to Detail.
- Communication Skills.

- Fundamental Computer Forensics Skills.
- A Desire to Learn.
- An Understanding of Hacking.

Computer system analyst:
- Strong analytical skills.
- Attention to detail.
- Teamwork skills.
- Written and verbal communication skills.
- Interpersonal skills.
- Flexibility.
- Adaptability.
- Initiative.

Software Engineer:
- C++ Mastery
- Familiarity with game engine tools
- Optimising code
- Excellent Communication skills
- Familiarity with cloud-based services (AWS, Azure etc.)
- Full stack web development
- Broadcast visualisation technologies like Vizrt

How do the skills in your required skill set rank in terms of demand from employers?
My required skill set are:
- Problem-Solving Skills.
- Technical Aptitude.
- Knowledge of Security Across Various Platforms.
- Attention to Detail.
- Communication Skills.
- Fundamental Computer Forensics Skills.
- A Desire to Learn.
- An Understanding of Hacking.

From the "Top IT Job Titles March 2018" pdf file, not all the skill are listed, these are all the ones that are in order of most demand to least.

1. Communication Skills
2. Problem Solving Skills
3. Attention to Detail.

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

1. Organisational Skills
2. Writing
3. Teamwork/ Collaboration

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

From the Burning Glass data, communication skills, problem solving skills and attention to detail are all in very high demand. Those are all skills that I most definitely possess and are conveniently skills required for my ideal job.

The data has done nothing but reenforce my choice of Cyber Security as my ideal job and career.

Quentin K Schuster
Software Engineer

How do the IT-specific skills in your required skill set rank in terms of demand from employers?
Looking at the Burning Glass Technologies(BGT) data, the IT skills most in demand in regards to software engineers is spread, with JS, Java towards the top and Software Engineering, C# and Git towards the bottom end of the rankings.

How do the general skills in your required skill set rank in terms of demand from employers?
As a Software engineer, especially for my ideal job, communication skills and organisational skills are a must, ranking 1st and 3rd respectively on the BGT data. Skills such as these and teamwork, planning, leadership and mentoring rank 5th, 7th, 11th and 13th respectively. My required skill set calls for outstanding and effecting communication and people skills in regard to working as a part of a large team. I can understand why the above skills are of the most demand.

What are the three highest ranked IT-specific skills which are not in your required skill set?
SQL, Microsoft Windows and SAP

What are the three highest ranked general skills which are not in your required skill set?
Problem Solving, Writing and Troubleshooting

Having looked at the Burning Glass data, has your opinion of your ideal job changed? Why or why not?
My opinion of my ideal job has changed looking back on it with respect to the BGT data. Although IT-skills are important and in demand. It is not the only thing that employers are looking for. 27 435 jobs postings have a demand which asks for specialised skills but 121 997 are in need of general skills, with 44 467 of those being communication skills. This means that although your technical skills are valued, how you communicate with your colleagues and others also play a part your career.

Kanav Atri
Cyber Security

How do the IT-Specific Security Engine is skill in your required skill set rank in terms of demand from employers?

The IT specific skills mentioned in my skill set e.g., JAVA, Microsoft Office, Customer Service, Business   Management have been ranked in the top 20 skills in greatest demand.

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

General skills and experience mentioned in my skill set e.g., Mentoring, Teamwork, Time management
Attention detail have been marked as the top general skills in demand from the employers.

Which are the three highest ranked IT-Specific skills which are not in my required skill set?

- SQL
- Java Script
- Project Management

Which are the three highest ranked general skills which are not in my required skill set?
- Writing
- Trouble Shooting
- Analytical Skills

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

Keeping in mind my current skills and experience in customer experience industry solutions architect might be a better suited position as understanding client's requirements and following through until requirements are met is an essential part of this role however considering my passion and interest in the cyber security field and the fact the scope and skill shortage in the industry, I would say that my opinion for my ideal job is still very much the same.

Victor van der Meer
Multimedia & Web Developer

	General Skills	IT Skills
	Communication	HTML5, Git, SQL Server, Adobe Photoshop
	Organisational Skills	Microsoft Office & Excel
	Problem Solving	Web Programming
	Teamwork/Collaboration	PHP & Photoshop
		Cloud computing
How do these skills rank in terms of demand from employers?	Communication (1st) is by far the most in demand skill, followed by Organisational (3rd) and problem solving (4th), which are all in the top 5 in the 'Skills in Greatest Demand" table.	SQL(1st) is the most in demand skill from followed by JAVA (2nd) JavaScript (3rd), SQL Servers (8th), HTML5 (9th).
What are the three highest ranked skills not included in your required skill set	- Problem solving - Organisation - Writing	- SQL - JavaScript - Java

Having looked at the burning glass data, has your opinion of your ideal job changed? Why or why not?
After looking at the burning glass data my ideal job has not changed because, I already have a solid understanding of web programming and technology, I also like to create videos and multimedia so my ideal job, I am right in my element.

Matthew Ahearn
Data Scientist

	General Skills	IT Skills
	Communication	Python
	Teamwork	SQL
		Machine learning model building and implementation
		Experience building and prototyping models from scratch
		Cloud computing
How do these skills rank in terms of demand from employers?	Communication is by far the most in demand skill, being approximately equal to the next three combined! Team work is the fourth most in demand skill.	SQL is the most in demand skill from employers however machine learning and prototyping models are not mentioned. Surprisingly, Cloud computing is also not included in the burning glass data. Python is toward the bottom of the list and is listed only one third of the times JavaScript is.
What are the three highest ranked skills not included in your required skill set	Problem solving Organisation Writing	JavaScript Microsoft Windows Java

Having looked at the burning glass data, has your opinion of your ideal job changed? Why or why not?

After looking at the burning glass data I find that my original opinion of the Data Scientist job is reinforced, it is a highly specialised position requiring significant experience and often postgraduate qualifications. Consequently, there will be a small pool of reasonable applicating competing in a smaller job market. I found it interesting to see that except for SQL the required skills do not reflect the demand from the industry at large. This may mean that work experience I am likely to gain in the near future and after graduating will be of limited use in this career path and I should make a concerted effort to apply for positions that will expose me to cloud computing and machine learning early on.