**INDUSTRY DATA**

GROUP IDEAL JOBS VS JOB DEMAND

The jobs that my group have chosen are as follows:

* Agile Coach
* IT Support Officer
* Penetration Tester
* Lead Game Developer

An **Agile Coach** is a person who works on the enterprise-level, they assist organisations, teams and individuals in making significant organisational changes, for the better. When transitioning into an agile environment it can be a real challenge motivating employees and guiding the ship towards a complete workplace culture shift. An Agile Coach is someone who can be depended on, and with years of professional experience, to coordinate that significant organisational change and successfully transition to the new work environment.

In a constantly changing work environment the ultimate goal of an agile coach is to foster more effective, transparent and cohesive teams to enable better outcomes for customers. In order to keep the explosive growth that an agile approach can bring to your business, it is of utmost importance to have a properly trained and experienced agile coach. The right coach will quickly accelerate your business to success, whilst having the tools and abilities to sustain that growth.

Some of the general duties of an agile coach are as follows:

* Helping teams analyze data and forecast better
* Helping a product or service owner to manage customer expectations better
* Coaching on showing better retrospectives
* Guiding leadership teams
* Keeping all parts of the corporation included, including non-IT resources
* Maintaining a high standard of work
* Focusing on continuous improvement and development
* Career development and HR guidance

The closest role to an Agile Coach that is included in the Burning Glass dataset provided would be a **Solutions Architect**, due to the similarity in job duties and descriptions. According to that data as of March 2018 solutions architects were the most in demand role in the IT industry, followed closely by graphics designers and well ahead of roles like software engineers and full-stack developers.

The role itself will usually find candidates that possess similar qualities, namely business management and analysis skills, building relationships and scrum experience. In reference to the Burning Glass data, these skills themselves are not as in demand as programming specialisation, ranking relatively middle in the pack compared to SQL or Javascript experience. Despite being one of the most in demand jobs in name, employers tend to value more programming experience.

***From Jonathon***

* The three highest ranked specific skills not in my skill set are JAVA, javascript and the more advanced side of SQL. I have experience with all these languages but I lack practical code writing experience as my professional career has always been more focused on analysis, management and process rather than coding.
* The three highest ranked general skills not in my skill set are time management, research and creativity. I often work on multiple projects or with multiple teams, and managing that can be a challenge in terms of time management. I'm still working on that aspect of my career. I am always looking to improve my ability to research the companies I work in, as I often work contract roles in diverse industries. In terms of creativity, I'd love to develop a better approach to product management to access greater creativity.
* My idea of an ideal job remains the same.

An **IT Support Officer** provides assistance and guidance to people and organisations in regards to computer software, hardware, maintenance and troubleshooting. The role itself lends itself to a lot of flexibility, the work life balance is quite manageable and you don’t necessarily need any formal qualifications to work as one, although it would help and make you stand out if you did have some sort of formal training.

The role itself is a sort of blend between customer service and IT and customer focused individuals would really shine in this type of environment. Many IT support officers possess some of these traits:

* Strong client focus and desire to help
* Analytical and methodical approach to problem solving
* Persistent yet patient
* Good communication skills
* Extensive knowledge of IT and computer systems
* Works well in a team or managing one
* Flexible and quick to adapt

The closest role to an IT Support Officer that is included within the Burning Glass data would be a **Service Desk Analyst**, due to the similarities in job duties and description. According to the data as of March 2018, it's safe to say this job is in extremely high demand, close to the third most in demand role in the industry. Once again, this role is well ahead of what you might conventionally think are high demand roles such as full stack developers or network engineers.

Some of the main skills required of a Service Desk Analyst or IT Support Officer are good communication skills, problem solving and ability to collaborate effectively. These also happen to be some of the most in demand baseline skills in the industry. According to the Burning Glass data, communication skills are more than double in demand when compared by the second most needed skill of problem solving.

***From Bradley***

* The three highest ranked IT specific skills not in my skill set on burning glass are incidentally the top 3 skills (SQL, JavaScript and JAVA). Whilst I have learned a very basic grasp of some programming over the years (C++, Python, HTML) these are all areas I expect to work on and improve as I further my studies.
* The three highest ranked general skills I need to work on are: Teamwork/ Collaboration, planning and Leadership skills. Given I have been in a working environment over the past 15+ years, I do have some grasp of all these skills to an extent. However, I feel these are areas I could work on improving considerably.
* The data provided by burning glass has really highlighted for me the variety of specialised and general skills in demand in the IT industry. While it may not have completely changed my idea of the ideal job, it has definitely opened my mind to a lot more possibilities.

A **Penetration Tester** is a person who assesses the security systems within an organisation, they conduct tests and purposefully attempt to exploit existing systems and software to detect and correct system weaknesses and vulnerabilities. This type of role is sometimes referred to as ‘ethical hacking,’ with the professional recording vulnerabilities and creating solutions to the weaknesses that are found. The typical duties of a penetration tester are:

* Conduct formal testing on computer systems
* Assess the security of computer software and hardware
* Conduct security audits and legal cyberattack simulations
* Design and utilize time sensitive hacking tools to acquire pertinent data
* Generate tools for breaking through security measures
* Detect and correct system weaknesses
* Implement solutions to enhance data security
* Provide IT support

There isn’t an appropriate surrogate role to a Penetration tester that is also included within the Burning Glass data, but appropriate stand ins could be **Ethical Hacker, Security Engineer, Assurance Validator** or **IT Security Analyst**. The salaries of a role like this seem to range from 70k USD on the low end to over 100K USD on the higher end. According to industry focused website Computer Science Online, the IT security industry is growing exponentially and quickly driving the need for encryption, certificate management, firewall infrastructure and anti-malware. These needs within the industry have fuelled the explosive demand for these kinds of professionals. According to the US Bureau of Labor Statistics, employment for these kinds of roles should grow by over 30% between the years 2018 and 2028, this is much faster than average growth.

Some of the main skills needed from Penetration testers are proficiency in several scripting languages, robust creativity and problem-solving skills as well as extensive knowledge of technical systems and terminology. Luckily for individuals seeking this career path writing, problem solving and creativity are in demand general skills, and SQL, Js, JAVA are some of the most in demand scripting languages that a penetration tester would make use of.

***From Callum***

* I am mostly unfamiliar with SQL, JavaScript, and Java. Though I have done some programming in Java, I couldn’t say I can adequately make programs with it. I plan to learn as many practical IT skills as I can, but for now I can only program in Python and am currently learning C.
* Out of all the general specific skills listed in the Burning Glass data, I would say the 3 highest ranked one not in my skill set are communication skills, team work/collaboration, and leadership. Rarely in my life have I had the responsibility of leading a team, or being a part of teams in general. I’ve never been overly interested in involving myself in team sports and other group activites and generally prefer to keep to myself to get things done. Whether or not I end up preferring team work over solo work some day, I do intend on improving these social skills for the betterment of my career and character, and being part of this team assists me in that.
* The highest ranked IT job titles haven’t really piqued my interest personally. My ideas of what job I might want to do have not changed since reading this data, though I am pleased to see that the Front End Developer title is pretty high up as it’s something that comes to mind when thinking about my career.

A **Lead Game Developer** is responsible for how a game looks and plays, they work with a team to figure out characters, props, environments, storylines and other game artefacts. They then share those ideas with the rest of the developer team and start ensuring that deadlines can be met and organisation budgets can be adhered to, they will be the one responsible for any major changes or shifts during development. In a code development context, game developers will create and maintain the codebase of the game and implement and roll out features from the design team while incorporating elements like music and art also from their respective design teams. The duties of a Game Developer typically include, but not limited to:

* Develop responsive applications for a variety of gaming platforms
* Utilise current generation game engines
* Collaborate with design teams to code features
* Produce prototypes of game elements or ideas
* Animate characters or objects
* Troubleshoot and fix bugs
* Provide code documentation, especially when working collaboratively

According to the Burning Glass data, with the exceptions of .Net and Java Developers, as of March 2018 there isn’t actually that huge of a demand for game or software developers, the market seems to be saturated and there is more developers than are needed in the industry. Some of the general skillsets developers will have are in demand such as problem solving, collaboration and creativity, what really sets these types of professionals apart are their specialised skills with languages such as Js, Java, C# and graphic design being highly in demand in the industry. Programming knowledge is essentially a requirement with many employers needing at least a Bachelor's degree in ComSci or IT.

***From Alex***

* The highest ranked IT specific skills that are in demand but not in my current skill-set are SQL, JAVA and Business Management
* The highest ranked general skills that are in demand and need to be built upon in my skill-set are leadership, management and organisation skills, I am currently transitioning into a leadership role within my current career and I believe that experience will fill in the gaps
* After viewing the Burning Glass data, my ideal job has not changed at all, video games are a huge passion of mine and I would love to be able to create a virtual world of my own design. Ideally I would also work independently either solo or in very small teams as I focus on my current career.