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Personal Information

I'm Jacob. I'm fresh out of high school, with a keen interest for computers and maths. I'm originally from Germany, but I've lived in Australia for the past 10 years. I started primary school there, where I completed my 3rd grade. I completed primary and high school in Australia, where I studied maths, physics and Japanese. I spent a lot of time programming however, and completed my HSC major project for Multimedia. Having recently completed high school, I have enough time available to myself for some personal projects, which I spend studying the inner workings of the likes of the Linux kernel, the gnu C/C++ compiler or the Chromium web browser.

Interest in IT

Discovering my passion

Like with any tech-enthusiastic 10 year old, I discovered Lego Technic and Mindstorms. It was amazing, because you could program them to do clever things. They had sensors and motors on them, and it was just the best thing ever. I was hooked.

My Computers teacher eventually introduced me to [Scratch](#), a graphical code playground focused around learning to program, and it was targeted at a younger audience. I ended up spending a majority of my 5th grade playing around with it.

You may have guessed by now then, that I loved programming. Of course I was still tied to the primitive block-coding language with a mouse and a website to do all the heavy lifting for me. That's when I fell into the world of the browser.

[Daniel Shiffman](#) is a YouTube content creator known for his association with the [p5js Creative Coding library](#). I spent – well, it's safe to say, a lot of time – toying with sketches similar in nature to his. I'd say that's where my intuition and experience with programming was really distilled to the point of being able to create something truly useful.

Like with anything, the more you do it, the better you get and I was no exception. I'd gotten to a point, where my lack of skills was no longer holding me back. I remember a conversation with my mother where I explained to her that I was learning at an exponential rate. It was at that point where I stopped calling myself a beginner.

As I was nearing the end of high school, it became time for me to select my HSC major project for Multimedia. The project had a huge number of restrictions on it, but I eventually settled on a program which would allow users to play around with [Boolean Algebra](#) as it's used in electronic circuits like CPUs and GPUs directly in your browser. I'd completed the project to an honestly impressive degree, and I'm proud of it to this day. In fact, you can access one of the earlier versions of it under [my personal website](#).

What actually are my interests?

I like to think about things – I enjoy puzzles and logic games. I'm also told that I have a knack for languages and grammar, which would explain why I enjoy playing with maths and logic. If I had to describe my passion for IT, I would say it revolves around navigating systems of rules which can produce interesting behaviours.

A good example is of me one night scrolling through YouTube, a video about this thing called an esoteric language called BrainFuck appeared. Entitled something like Can you create a programming language with only 8 symbols? Yes you can! I just had to watch it. The video mentioned that BrainFuck is Turin Complete, meaning any [p-type mathematical problem](#) (if you're determined enough) can be solved with it. This just blew my mind. With technically only 7 instructions, the language could do all of maths. Because the 7th instruction was a branch-if-zero instruction, you can implement loops, as decrementing a counter until it reaches 0 allows conditional behaviours based on the result of a comparison.

So in essence, computer science. Although BrainFuck didn't inspire my passion, as such – I knew what I was interested in long before – it really allowed me to see clearly why.

So why RMIT?

As I've mentioned, I'm from Germany. Specifically from a city called Tübingen. The city is actually built around a castle, turned university and is an incredibly well-respected university all across the world. My plan was to return there and step into a bachelor of Computer Science. But since Covid-19 and the Ukraine war, that's looking unlikely.

Come one day, thinking about the future, I decided to have a look at what compsci courses are available in Australia and landed on Open Universities Australia. Their landing page featured a popup prompt for a 1-on-1 talk with advisory staff. With not much thought, I put my phone number in, not expecting anything. I got a call 20 minutes later where I got the chance to discuss some of my personal interests and ambitions. As the conversation turned onto what courses were available to me, it occurred to me that Eduardo (the operator) had already begun the enrolment process on my behalf. He explained to me that RMIT has one of – if not the best computer science and IT programs around, and I gave up on the I didn't ask for this thought and went along with it. I was further motivated because *Royal Melbourne Institute of Technology* has a nice ring to it.

So to be perfectly candid, RMIT was much less a conscious and calculated choice, as it was a string of fortunate events and so far, I'm loving every minute of it.

My ambitions for my studies

When working on personal projects and reaching a roadblock, one of two things can happen; either, I ditch the project or I spend so much time researching I basically force an epiphany upon myself. That famous *Aha!* moment is euphoric to say the least. My takeaway from this is mostly how many opportunities there are to connect so many disconnected pieces of knowledge into a huge web. While I feel that I have a good general knowledge across many computing and programming concepts and subjects, I do know from experience that knowledge always has gaps in it, which I hope to close as much as possible by studying IT and Computer Science.

My Ideal Job

The screenshot shows a job listing on the Seek website. The header includes navigation links for Jobs, Courses, Businesses for sale, and Volunteering, along with location filters for AU and NZ. The user is logged in as 'AU'. The main navigation bar includes Job Search, Profile, Career Advice, and Company Reviews. The job listing is for 'Senior Software Developer' at 'Ceridian Australia'. The location is 'Sydney - CBD, Inner West & Eastern Suburbs'. The job is 'Full time' and 'Information & Communication Technology - Developers/Programmers'. It was posted '2d ago'. There are 'Apply' and 'Save' buttons. The 'Job Location' section states: 'For this role, we are open to remote work/work from home and can hire anywhere in Australia. Ideal markets for remote work include: Sydney, NSW; Melbourne, VIC; Brisbane, QLD; Adelaide, SA; Auckland, NZ; Christchurch, NZ; Wellington, NZ'. The 'Work Rights' section states: 'For this role you must hold Permanent Residency or Citizenship'. The 'About the Position' section describes the role as a senior developer on the Workforce Management team, responsible for creating the industry's next generation Human Capital Management (HCM) solutions. It mentions that the role involves working on a ground-breaking solution that helps companies increase their efficiencies through tracking time and attendance and intelligent scheduling of their employees. The role also involves design, analysis, prototyping, development, testing and support of our products. The role requires collaboration with clients, prospects, implementation partners, and Dayforce personnel to envision and deliver the required functionality. The role also involves conducting code reviews of peer work and mentoring other developers. The 'Qualifications' section lists: '2-3 years of demonstrated experience with modern JavaScript libraries such as React, Angular, Ember, Backbone, etc.'; 'Working knowledge of modern web technologies including: HTML, CSS 3, SVG, WCF, JSON, etc.'; 'Strong coding skills in a modern object-oriented language (e.g., C#, Java, C++)'; and 'Strong SQL skills'. The 'Desired Qualifications' section lists: 'Experience in enterprise software development'; 'Hands on experience in applying design patterns, writing unit tests and optimizing performance in application level Type-Script/Javascript'; 'Experience with .NET framework'; 'Working experience with ASP.NET MVC'; 'Experience with Dojo/React framework'; 'Good understanding of multi-threading and thread synchronization'; 'Disciplined self-starter, capable of working independently or in close collaboration within an agile development team'; 'Experience in Automated Testing and Unit test'; and 'Excellent communication and collaboration skills'.

Senior Software Developer
Ceridian Australia
Sydney - CBD, Inner West & Eastern Suburbs
Information & Communication Technology - Developers/Programmers
Full time
Posted 2d ago
[More jobs from this company](#)
[Apply](#) [Save](#)

Job Location: For this role, we are open to remote work/work from home and can hire anywhere in Australia.
Ideal markets for remote work include:
Sydney, NSW
Melbourne, VIC
Brisbane, QLD
Adelaide, SA
Auckland, NZ
Christchurch, NZ
Wellington, NZ
Work Rights: For this role you must hold Permanent Residency or Citizenship
About the Position:
The Dayforce Product Development team is looking for an experienced Software Developer to create the industry's next generation Human Capital Management (HCM) solutions.
As a senior developer on our Workforce Management team you will be working on our ground-breaking solution that helps companies increase their efficiencies through tracking time and attendance and intelligent scheduling of their employees. Your impact will be evident through your effective participation in the entire lifecycle of our software including design, analysis, prototyping, development, testing and support of our products. You will work closely and collaborate with clients, prospects, implementation partners, and Dayforce personnel to envision and deliver the required functionality. You will be conducting code reviews of peer work and mentoring other developers.
If you are a technology enthusiast, have passion for creating great software, want to see your creation utilized by thousands of people all over the world, and possess one or more of the following qualifications, we want to talk to you.
Qualifications:

- 2-3 years of demonstrated experience with modern JavaScript libraries such as React, Angular, Ember, Backbone, etc.
- Working knowledge of modern web technologies including: HTML, CSS 3, SVG, WCF, JSON, etc.
- Strong coding skills in a modern object-oriented language (e.g., C#, Java, C++)
- Strong SQL skills

Desired Qualifications:

- Experience in enterprise software development
- Hands on experience in applying design patterns, writing unit tests and optimizing performance in application level Type-Script/Javascript
- Experience with .NET framework
- Working experience with ASP.NET MVC
- Experience with Dojo/React framework
- Good understanding of multi-threading and thread synchronization
- Disciplined self-starter, capable of working independently or in close collaboration within an agile development team
- Experience in Automated Testing and Unit test
- Excellent communication and collaboration skills

The [ad I found](#) is for a company called *Ceridian* – a Human Capital Management software company. The environment is dynamic, fast-moving and progressive.

The job is a developer position. This means actively working on the project by writing code and organising solutions. The environment is ideal as there is a supervising figure giving clear instructions, however leaving enough freedom to be creative and productive.

An intimate knowledge of both, languages and frameworks are required for this position, as they're integral to the development process. These include object-oriented languages like Java or C++, and frameworks such as Gradle and a plethora of TypeScript/JavaScript frameworks, as well as competency in IT and fluency with development processes, and general computer skills.

I'm competent with programming and its routines and processes, as well as the frameworks mentioned above, especially TypeScript/JavaScript and the React ecosystem. Although I have not worked in a professional environment before, and hence cannot prove 2–3 years worth of experience, I have most of the skills asked for.

Gaining skills is very much a question of exposure in programming. When facing new problems, the best way to gain experience is by solving the problems. Therefore to gain skills I may be lacking, such as optimal database

design, working on projects that involve these will boost my abilities in these areas. Further, by studying more specific areas of programming and computing, these areas can be formally trained. Lastly, experience can be gained by starting in Junior or intern software development positions and gradually building a portfolio.

Personal Profile

16personalities (Myers–Briggs)



Features

Personality type

Virtuoso (ISTP-T)

Traits

Introverted	59%
Observant	52%
Thinking	57%
Prospecting	67%
Turbulent	60%

Role

Explorer

Strategy

Constant Improvement

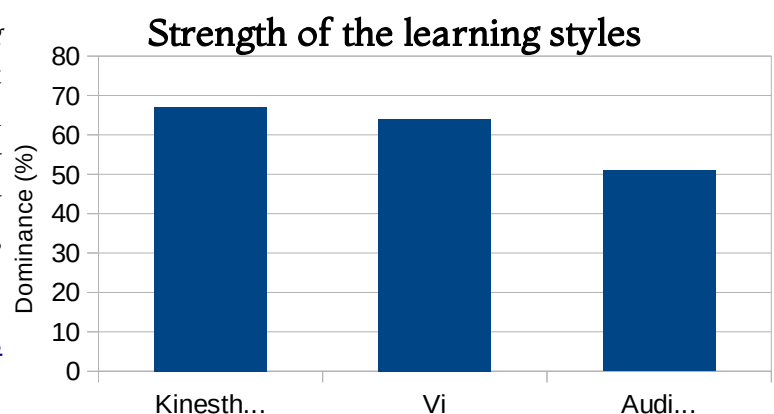
The profile overview of the personality type given, states that I enjoy being creative and am very present-oriented. While I do note these qualities to be true and often find value in them, it is also an indication that there are some potential areas of weakness relating to group-work. It mentions an incredible mechanical and tactile intuition, which previously has aided me with design and construction tasks. My interest for technical and challenging tasks is also described in depth, affirming my sought for mentally stimulating problems. I believe this gives me the potential to become a very valuable member of a team, as I would be able to direct and explain issues with high accuracy, as well as produce clearly defined solutions quickly. As such, my role in the team would be to work in the front-lines, advancing the project.

[See my results](#)

Personalitymax (Learning Styles)

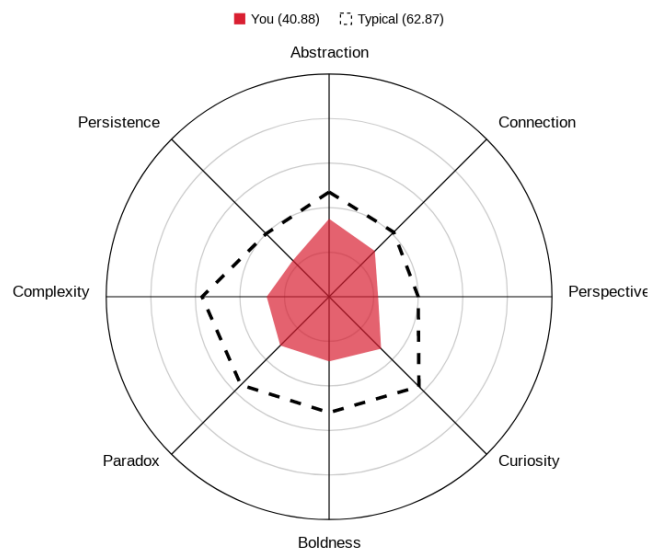
I'm told over various sources that *Learning Styles* is more of a misnomer, as the most effective education is a combination of all styles, so I'm reluctant to allow myself to draw conclusions from these results, although they do seem coherent with my previous understanding of how I work best.

Regardless, [my results for the learning styles test can be found here](#).



An understanding of how I perceive and understand issues will allow my peers and I to communicate more efficiently, to convey information with greater precision to prevent ambiguity and hence miscommunication.

testmycreativity.com (Creativity Test)



This test is designed to measure creative abilities, by measuring how various concepts are connected and recognised. This would aid my team in directing tasks, as an understanding of how I am able to conjure new ideas would give direction towards which types of problems I solve most efficiently.

The given results don't indicate much to me, as I don't believe these qualities are tangible enough to measure. My thoughts are confirmed when redoing the test with wildly different results for answers that were only somewhat honest.

[My test results.](#)

Project Idea

Programming can be mentally exhausting. To make life easier and more productive, eliminating the various points of resistance within the working environment can be a huge step towards improving efficiency. Sometimes however, adjustments need to be made to source files or scripts without direct access to the code base, be it over a remote shell or through a managed repository and a handheld device is the closest thing to a workstation available – and it should support your needs as a programmer, however often does not.

The biggest bottlenecks with programming on handheld and mobile devices are their limited screen real-estate, and most notably, their spoken-language-oriented keyboard – fine for short text messages or quick Google searches, but far from ideal for programming.

Hence, I'm proposing a suite of mobile software targeted towards improving the mobile programming experience by completely reinventing the way software is written. Programming on desktop and laptop devices is done through a keyboard, and combinations of keys can be used to control functions of the environment to boost productivity even more. The analogue of this on mobile devices is gestures. Using combinations of strokes and touches on a screen, various features of the software can be operated and controlled in a much more direct and immediate manner, allowing productivity to be boosted substantially.

But the keyboard is still problematic. To address this, the developer operates on a board of semi-graphical elements, which can be connected and interacted with based on a language-specific set of rules, which can be installed and used in the form of plugins. The programmer operates the surface by dragging fitting blocks to their corresponding location.

Upon saving the document, the defined structure is exported through a plugin-defined way into the target language, allowing programs created through it to integrate with any existing compiler and toolchain.

Since the surface is contained within an IDE, automation and management utilities to aid developers further will be included.

The most notable requirements for software like this is the need for a device capable of hosting a development environment. Since modern web browsers fulfil these requirements quite comfortably, even on mobile devices, we can call this criterion met. Next is a sufficiently advanced gesture recognition algorithm. Ideally, the algorithm is able to distinguish between similar gestures, while allowing enough flexibility for minor fluctuations in movements. Since algorithms do exist for exactly these requirements, the criterion is also met. Lastly, a device should have enough screen real-estate for comfortable code-overview, although this is more of a user-preference than system requirement.