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**Preparation for Life-Long Learning** document

By Mohammed Al Harbi

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# Introduction about me

*I am Mohammed Saleh Al Harbi, at the age of 11 I used to like sport activities with my cousin’s football in particular. Unfortunate events occurred at that point; I broke my right hand twice as a result of my energetic, irresponsible actions. I was told them not to do any risk otherwise risk breaking it again which definitely will lead to it being cut.*

*I shifted all the focus and energy I had back then into computers and technology, this is the time where I started learning my first programming language. I kicked off my journey using Adobe flash developing simple games in 5th grade. After a very short time, the school noticed my talent in programming and my passion, so they encouraged me to continue as my uncle Ashraf did when my family used to go visit them. I am not exactly certain if this is inherited genes or not, but my entire family is actually obsessed with IT. I have 3 uncles. One works as IT director, another one is swimming teacher but he completely made the IT system of the school from scratch including servers and the development of mobile software and third uncle is professional film production. He got 2nd place in Microsoft production competition in the UK in 2011.*

*2 Years later, the school has signed me up in a competition of game development and they gave me free holidays when my fellow students used to go to school (was very exciting back then.) I spent those 2 weeks of time in developing a 3d game using C# and Unity3d game development engine (C# is my first programming language and I picked it up at age 13-14). I won the competition and was surprised about that and received about 200$ credit.*

*In highschool, I really wanted to push for IT majors regardless of the subject and for me to sign up I had to get at least 75% overall to get taught in Oman in one of the IT universities. I scored a very good mark that actually allowed me to study the IT major outside Oman completely sponsored including a year to study solely English in the UK. My family were very happy about this and I passed the International English Language TestIng System and started my professional IT journey in the Netherlands in Eindhoven.*

# Personal development

*Prior to joining Fontys, I had some programming experience with Unity3D using C# and I was excited to actually expand my knowledge to be able to develop all kinds of projects including games, desktop applications, websites, understand what the heck a server is, understand and learn about cloud providers like aws and develop my own artificial intelligence.*

*In my first semester in Fontys university, I was introduced to multiple IT subjects but in a very basic manner so I had some idea about infrastructures, how computers were developed starting from the very first computer all the way to how very thin fast computers nowadays. Others topics such as application development which was taught in C# so I actually knew around 70% of the taught subject back then, and data science with SQL. Overall, the semester goal was to introduce me to the possible branches I have and to get some taste of what the working environment in such a branch looks like.*

*As a person who knew that developing is his passion, I choice application development route and started the second semester again with C# but we were introduced to Object Oriented Programming and that was totally new for me but luckily I had a great teacher that taught the class all ins and outs of it, (Got outstanding mark in that semester)*

*Afterwards, Third semester started I learnt web development in depth by completely developing a monolith application via RESTful API, connecting that to a database and having a frontend with framework of my choice. I was given much flexibility in choices but I learnt how to document what I choose and how to convey the reasoning of the selected technology. One of the achievements I am really proud of in that semester is when I tackled a research problem both in research and practically of recognizing license plates using artificial intelligence (even though the semester focus is software).*

*The fourth semester was quite different as I had to choose a route where software was no longer an option. After asking experienced people in the offered fields I eventually chose Artificial intelligence. I started my journey in learning AI development and was quickly overloaded as it was a completely new subject to me back then and I figured I should stay home and learn as much as I can then I went back to Fontys with a comprehensive idea about my new skills and research I did. That was not the best idea as I was not actually learning from the provided resources given by teachers and I had to do what 5 data science students do combined to pass the semester. So, I actually deliver 5 different AI projects to prove my learning outcomes. This sounds harsh and it was working/researching for 14 hours a day at least for 3 months, regardless, I did it and was very proud of it and actually benefited me a lot.*

*I started my internship after a coding interview with Martijn Rutten (Chief Technology Officer.) at Insify. In collaboration with Fontys I started my 5th Semester by working in a natural language processing AI project. Their challenge was to be able to classify company descriptions to known activities in the form of known activity codes. Not only did I benefit from semester 4 in depth knowledge of AI by the pressure I had gone through but I started researching and implementing Deep learning idea on NLP and state-of-the-art technologies on the field using Transforms (AI that trained on huge number of datasets like the entire wikipedia of words ready to tune) which are subjects that advanced Semester 7 AI students get an idea about.*

*I was able to complete automation tasks in additional to this, like decomposing a deep learning model to fit Generalized linear models and performing automation tasks such as automated GLM testing, automated parsing data from pdfs their partners produce with customer to csv files while keeping GDPR in mind (used AWS to parse files via Simple storage service). Those side tasks along with the primary challenge got Insify keeping me in the company and I had been working with them for around 11 months in various automation and analysis tasks.*

*I also developed an application used in youth center ceremony which took place in Oman.*

*A picture containing text, night

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The above is a web application solution, users can scan the QR code and enter one word then a collection of all words (except ad words) are then rendered in the big screen using WordCloud technologies.

# Passions

* *Game development as a hobby.*

* *Developing APIs.*

* *Developing websites.*

* *Coding.*

* *Automating processes.*

# Future Plan

*As of right now, I am in semester 6 which focuses on developing enterprise solutions and being able to justify choices of technology, the reasoning why such design is secure and scalable and proving it.*

*I asked the CTO of Insify regarding modern technologies in the enterprise environment and the summary was “ Serverless is the best choice for startup business, let developers focus on business logic, no headache managing servers, and can scale in and out on the fly. ”*

*This has encouraged me to learn AWS Serverless stack technologies which I can say that I got some real experience on as I have my serverless solution already hosted in HTTPS protocol using best practices and in enterprise scale using built-in auth services as it is one of the best practises to perform in serverless security measurements Here is a link to my serverless solution (*[*https://ofs-platform.com/*](https://ofs-platform.com/)*)*

*Since I already mentioned that I still work in Insify and as a part-time intern with them I specifically asked them to funnel me with data science problems to allow me to maintain my data science skills while the university funnels me with software engineering related problems.*

*My weekly schedule is:*

**Monday:** *Half day data science, half day software group project.*

**Tuesday:** *Full day data science.*

**Wednesday:** *Half day data science, half day software group project.*

**Thursday:** *Full day software group project*

**Friday:** *Full day data science.*

**Saturday:** *Full day software individual project.*

**Sunday:** *Full day software individual project.*

After completing semester 7 with advanced AI topics, I plan to select an AI graduation project as this will allow me to end up having 4 Software engineering semesters and 4 AI semesters in Insify. I believe that the chance of one person studying either one is very high and so being a student and experiencing both greatly increases that chance for me. Additionally, the combination of both AI and Software is super great as the possibilities then become endless. For example, I can automate the like button by using computer vision AI to track hand move then the results forwarded to some server which then performs the like action internally. In addition to this, I made sure I update my LinkedIn profile and constantly add connections as this will benefit me in the long run not only to find a potential job after graduation but also may help others with those connections.

[*https://www.linkedin.com/in/mohammed-saleh-said-alharbi-510079229/*](https://www.linkedin.com/in/mohammed-saleh-said-alharbi-510079229/)