Computer Science Undergraduates from University of Wolverhampton

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# Introduction

The purpose of this report is to explore whether Jaguar Land Rover (JLR) should recruit an undergraduate who is studying Computer Science at the university of Wolverhampton for their Graduate Scheme. What are the skills and abilities which puts them a part from any other candidates from any other universities.

# **Discussion**

Computer Science course at University of Wolverhampton structured in a way to produce software developers who can effortlessly make the transition from being student in the international computer industries. This ability is thought thorough grounding the core principle of the computer science and integrating with programming languages, tools and techniques used by all software engineers worldwide. The university offers a wide range of modules to its students on this course. This wast range of modules, of which some are optional, designed to deliver core principles beside the latest advances in technology. Student will learn the cutting edge technologies and get hands-on experience with the latest advances in the field such as multicore processors, GPUs and embedded microprocessor systems (University of Wolverhampton 2020).

Vehicles are being more and more technologically advance every year. From using your phone to get access to your vehicle to self-driving cars. Cars of the future most do more to satisfy customers in safety, affordability and technology. There have to be pieces of software build within the car to assists drivers with stability and assistance systems. Software developers in JLR responsible for design and developing pieces of software which will be used within their cars. This software programs most be designed to make the cars perform better and make them stand out from the competition. The company using model based software development and direct code writing. Anyone in undergraduate scheme will be given twelve months long opportunity in the company, to working alongside an experienced software developer with years of experience in the field (Jaguar Land Rover, 2019).

Undergraduates at the University of Wolverhampton are given an opportunity to work on their academic skill and team work. This module will be teaching the students how to learn new techniques whether it might be to advance their academic skills or to be an effective force within a team. These sets of skills are vital for a student entering undergraduate scheme with JLR. They have to be able to work effectively with the current software developing team in the company. And being able to take responsibility for their own learning is crucial as they will be coming across new topics and technologies which will be required to be researched.

The main role of a software developer within the company is to design and develop software for JLR products. This requires the graduates on the program to have solid understanding of low-level programming languages and embedded systems. Being able to write clean code and safety most not be taken lightly. An undergraduate from the university of Wolverhampton will be studying Embedded Systems Programming. In this module they will be learning the fundamental of programming in embedded systems, basic of electronic, with input and output devices to the embedded systems. They also undertake an Introductory Programming and Problem-solving module. This is where they learn the principle concepts of programming which then can be applied to any programming languages. Learning the fundamental concepts such as problem-solving, algorithm design, data types, programming pragmatics and object-oriented programming. Once gaining these skills, they can be applied to any problem and being able to use any programming language as chosen tool to do so.

Another interesting module which they study is Concepts and technologies of AI. Here students are familiarized with various tools, techniques and applications of Artificial Intelligence. Students with this type of knowledge will be vital in the future development of self-driving car within the company. JLR is aiming to develop the first self-learning car in the world (Land Rover, 2020). In order for this goal to be achieved and maintain the capabilities for the future, a new software developer with background understanding of AI is crucial. A self-learning car is designed to take the chore of driving away from the driver and make them concentrate solely on driving. The car will be able to recognize the driver by key fob or phone while approaching the car and grand access and learn drivers habits. This can include such things as remembering their favourite playlist and radio station. The car then can play the appropriate radio station or playlist given the drivers mode or time of day.

Robotic Engineering is firmly embedded in the foundation of the company now. From robots on the assembly line, robots in our warehouses to resend collaboration with Harvard University to work on super-human factory of the future. This is part of an effort to find and develop super-human strength in the factory of the future (Jaguar Land Rover, 2017). Students from the University of Wolverhampton will be already taken a module on Robotic Engineering. They will be familiar with fundamental concepts, essential engineering mathematics and design principle. This makes the student from the university of Wolverhampton valuable because they would be able to work with different teams on different projects whether it would be a project to build a robot for assembly line of write a code to allow the car to park itself.

Data is a valuable asset for the company. Data is how the car will be able to learn and make a decision. The car will not be any smarter if the data it collects is not being interpreted and used the correct way. That is why is it so crucial for a software developer to be able to work with large amount of data and be able to interpret it correctly. A computer science student from University of Wolverhampton will be taken a module on Big Data. They will learn the vital concepts, theories and practice of Big Data. Engineers with these skills will be very important for the company to be able to handle all the information that all the cars will be sending back for processing. All the cars most be feed the right information to stay safe on the road.

A good software engineer will be aware of all the upcoming new technologies in their field. This will allow them to stay updated with current technologies, which means the company can stay ahead of competition. Technology growth is exponential which means the company must keep its technical teams up to date in order to stay in the playfield. An undergraduate who is aware of all the current and upcoming technologies in computer science industry will be a good candidate to join the undergraduate scheme with the company. That is what the universities of Wolverhampton is offering to it students, an awareness of both current and upcoming trends and development within the computer science industry.

# **Conclusion**

The most obvious finding to emerge from this report is that, given that all the qualities and skills that undergraduate from universities of Wolverhampton will be gaining, JLR should be putting them on forefront for its Undergraduate Scheme. During the course they be developing their study skills, programming skills and problem-solving. These skills are vital to any developer. On top of all that, they will be familiar with AI and machine learning which are vital skills for any companies right now.  
The best course of action to get student from university of Wolverhampton on JLR undergraduate scheme will be to arrange a job fair at the university. Sending a current software developer to talk to the students and tell them about the job opportunity within the company will be the best thing to do.

# **References**

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