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Dear Stuart Herbert,

I am applying for the role of Internal Job Engineer as described through our recent conversations.

Having published and presented a paper at an IEEE conference and earning the Portaltech Reply Bursary in Computer Science for best performance in the penultimate year of the Software Engineering MEng course, I am a capable developer with experience in developing in-house tools and contributing to open source projects.

Examples of my work are available on GitHub (<https://github.com/SoftlySplinter/>).

I am already achieving high marks from the coursework submitted for masters level modules, as well as already having achieved high marks from my final project, which also led to the aforementioned paper.

This project focused on dating the work of the Welsh artist Kyffin Williams using catalogue photographs with known dates. This involved using image processing techniques to analyse this pictures and classify a new example based on the existing work.

In my role at IBM I was responsible for creating and maintaining in-house tools and platforms, which aided the jobs of both members of the CICS L3 Service team and members of CICS management, through the automated gathering of statistics and the improvement or automation of regularly performed tasks.

During this time at IBM I worked closely with a CentOS Server running DB2 and a WebSphere Application Server, which ran some of the in-house tools. I have also managed a personal VPS which runs Nginx to provide web-based content and have previous hosted Flask-based Python applications using the WSGI module.

Although I have not had a huge amount of experience provisioning and creating virtual machines, I was able to quickly learn the basics of Vagrant during the programming exercise I completed in November, and have continued to use and explore the features Vagrant provides.

A main role in my job at IBM was to automate a lot of the end-to-end process used to deliver fix packs of CICS Eclipse-based products. This system pulled information from servers used to develop the fix packs, package it in a way which the update servers would recognise and then deliver the pack. This system also allowed these elements to be scripted in a simple language so the developers could further automate this process.

This system involved digging into a lot of the external APIs to figure how certain parameters were used and how they would affect the delivery of the fix packs.

I am also versed at using shell scripts to automate some of the mundane tasks I perform day-to-day, such as automatically pulling university notes from an online editor and then pushing these notes into a git repository. I'm also used to compiling code through the use of build tools such as GNU make or Python setup tools. I have also set up Travis integration with some projects to provide automated testing against different runtimes.

In my most recent job as Advisor at Aberystwyth University, it is one of my responsibilities to help students in lower years with their programming assignments. This is often a matter of debugging through their code and figuring out how it fits together, to then work out where their error is occurring and how it might be fixed without large changes being made.

I am a competent Linux user, both for desktop and server use. I also talk at and help organise events for the West Wales Linux Users Group.

Developed a game based on the travelling salesman problem which would introduce school children to the concepts of mathematics and artificial agents for the Blue Fusion event held at IBM Hursley. During this process I often had to control the quality of the code being committed and fix problems others encountered.

I have worked as part of an online group of artists improving the art for the open source game *Battle for Wesnoth*. I have also worked as part of a small group contributing to the open source project *pytentd*.

I have presented the subject of my dissertation; dating an artists work from catalogue photographs; at both the ISPA Conference and at the BSc Show and Tell.

I have also led a team of IBMers in organising and running a Java Masterclass at Swanmore School of Technology, often presenting the session content myself.

Sincerely yours,

Alexander D Brown