As I sat inside the new office from my recent promotion at HP, solving an internal search content issue for the fourth time that month, I found myself going through the motions, wondering where the joy from the better paying job had elapsed, and in a moment of sudden clarity, I knew: I had stopped facing new challenges. I was no longer learning.

While obtaining my degree at the “Instituto Tecnológico y de Estudios Superiores de Monterrey”, I was fortunate enough to be mentored by Dr. Gildardo Sánchez, under whom I undertook a research internship utilizing the University's state of the art Motion Capture laboratory. The purpose of the research was to analyse the precision of the equipment in order to determine whether motion data profiling via BLADE would prove beneficial for the diagnosis of patients with disabilities; treatment targeting optimizations being the end goal. Bureaucratic hurdles ultimately impeded the furthering of the diagnosis project, yet the data collected gave the hospital auditing board sound insight for further study on mocap-based diagnosis of physical atrophy.

Towards the end of my undergraduate studies I wrote a license plate recognition program, a project that I particularly enjoyed because it afforded me to combine previous knowledge, along with research into a new field, and a healthy dose of pragmatism. The concoction was a crossbreed between backpropagation neural networks and kohonen maps with the purpose of examining the effect that a set of prerecorded associations between letters and numbers (in the kohonen map) would have on the learning speed and accuracy of the neural network.  The result was that the time it took the system to reach the cusp of the learning curve, and consequently achieve a state of reliable results was cut in half. The net effect it had on me was much greater, however. It gave me a realistic sense of what applying cutting edge knowledge into a software development process entailed and I discovered how gratifying it is to stoke that flame. I decided then that I would not settle for less than this experience throughout my career; the thrill and sense of accomplishment that this manner of problem solving yields.

Upon graduating I took an offer from HP to join them as a software developer working at the intranet search department which services requests for 300, 000 HP employees. Before long I realized that the workloads between the software development and quality assurance teams were cyclic and alternated, so I decided to volunteer to help ease QA workload while it was at its peak since it coincided with my workload being at its lowest. This proved instructive in things like test case development and software testing automation as well as tools like Jmeter for web load testing and Quality Test Pro for automation. More importantly, it provided me with a different perspective on software development, which led to the incorporation of that mindset to my projects through unit testing and test driven development.

I then got more involved in the indexing process of the Internal Search tool. There I had my first encounter with Python and I soon fell in love with it. Within a year I was put in charge of all the Python development for Internal Search and given the title of "Python expert" within the team.

As I continued down my path, learning new skills and facing new challenges at HP, I got an offer for the position of Integration Consultant, which encompassed a greater paycheck and fewer headaches from technical difficulties. I joyously accepted the job. However I soon realized that it came at the cost of the everyday challenges which I had grown so fond of, and the learning they entailed. It was at this time that I left HP and decided I needed to take a step back and reflect very carefully on the path towards which I wanted to steer my career.

Auspiciously, a rock climbing accident that resulted in surgery and a six-month rehabilitation period supplied an opportunity to collect myself and emerge with a new vantage point. During this period I decided that it was time for me to go back out there and try to make a difference in the world, while consistently facing new challenges. I got my current job developing software for small businesses at a startup company called Messoft and began the long process of searching for learning opportunities that would continue to “feed the flame”.

Sheffield's MSc in Advanced Software Engineering program looms large, mostly due to its student-run software company (Genesys), where I expect to spend many an hour applying to practical, real world scenarios the concepts learned throughout my career. This approach I believe is not only well suited to my background and capabilities, but also to my motivation and long term career goals.

In addition, Sheffield's Computer Science program provides an ideal climate for me to develop my interdisciplinary interests, particularly in the fields of speech recognition and artificial intelligence. I was excited to find out that Dr. Eleni Vasilaki is a research supervisor at Sheffield. Dr. Vasilaki’s journal article: “Perceptual Learning via Modification of Cortical Top-Down Signals” served as inspiration for my aforementioned license plate recognition software, in which a kohonen map is used to represent the pre-wired perceptual ability to differentiate between characters in a noise free environment while the backpropagation network simulates the top-down rewiring of the visual cortex described by Dr. Vasilaki, thus enabling the system to mitigate the effects of noise, which is inherent to real world license plates pictures. These factors combined with the strength of Sheffield’s software engineering department would provide, I hope, a challenging but enjoyable environment.