When something is important enough, you do it even if the odds are not in your favor.

-Elon Musk

The greatest of human triumphs are often a result of a person’s endurance against overwhelming odds. I have always wanted to improve the quality of human life by contributing to the fields of Education and Healthcare. Computer Applications Programming, I believe, is the means by which I can make such contributions.

In the pursuit of my dream, I co-founded the start-up “Let.Me.Practice” which was an online platform where high school students would take Objective format tests and the platform would analyse the need for improvement across multiple criteria such as topics difficulty levels and question formats. After months of late night coding sessions and relentless attempts to improve the system’s analytical capabilities, the project showed some initial success. The application provided insights to both students as well as teachers and as a result of a 1.5 month long pilot, saw the average student score rise by 15% for a class of 40 students. However I had to give it up in favor of a more stable, full-time corporate job as I could not afford to dedicate all my time to this project once it started growing.

I later came across a similar platform used at Khan Academy which used machine learning for performance grading (the links to corresponding blog entries are provided at the bottom). The author, using his machine learning expertise, brought about a revolutionary and insightful change in the way a student’s mastery of a topic was gauged at Khan Academy. I was fascinated to see how the use some very simple Machine Learning techniques would make the platform far more powerful and intuitive than it had been before. My fascination continued as I followed more blogs and attended numerous seminars and webinars pertaining to the subject. I soon came to the realization that this was a field with extremely far reaching consequences and the potential to make every aspect of life better for every human on the planet. I believe that to pursue my dream of the betterment of humanity by contributing to my fields of interest, a deep knowledge of Machine Learning techniques is essential. After contemplating over the idea for a few months, I finally decided that my dreams worth pursuing even if it meant having to quit my (COMFORTABLE) job.

As an Electronics and Telecommunication Engineering student at VESIT Mumbai, I got introduced to the field of computer programming in my first year while working on a simple application for my Library’s inventory management. Programming instantly appealed to me as I was able to solve real world problems in a fast and effective manner. As I expanded my horizons further, I decided to pursue a career in Computer Applications Programming. I also participated in various events and won a prize for Computer Science project at a technical festival held under IEEE Mumbai section. My rigor and passion towards programming paid off when I was able to clear the stringent interview process for Java Application Developer at one of the largest banks in the world (**BNP Paribas**). More noteworthy being that fact that I was the only graduate recruit in my batch of 60 employees not belonging to a Computer Science specialization.

During my tenure at BNP Paribas I worked on a critical component involved in Interest and Commission computations named the Interest Computation Module (ICM). This component was utilized by 12 applications across my entire department and catered to 6 global financial products initially. This was later expand to cater to over 10 global financial product offerings. Working on ICM enhanced my understanding of Object Oriented design and SOLID design principles. I also learned the hard way, the importance of focussing on Data Modelling and Web Interface Design at an early stage in application development. My contribution to the project involved proposing and implementing the Data Model, implementation of the business layer and subsequent enhancements to both when the 4 additional financial products needed to be supported.

Post my stint at BNP Paribas, I joined JP Morgan Chase & Co as an associate developer where I continue to remain employed as of today. Here in a brief period of 1 year, I have already worked on two very high impact projects. The first of these projects was an Object Relational entity mapping tool which compared entity classes coded in Java to the database tables that were supposed to persist them. The mapping tool would then generate a set of Sql statements for updating the database tables as per the entity’s structure and also generate a summary report of the changes made to the database. The success and acceptance of the project depended largely on the right choice of data structures and algorithms chosen to represent and compare the entity to the database schema. Since it's rollout this tool continues to save hundreds of developer hours every month by automating a tedious and error prone task. The second noteworthy project that I worked on was a web service for querying and updating a set of globally distributed caches collectively called the Static Data Cache (SDC). The project involved a web service that would update the primary instance of the SDC and then ensuring that the update propagates to the multiple secondary or regional instances. This project required me to unify the data schema and resolve anomalies in the storage semantics across various regional users of the SDC. The unified schema with the common rules of usage semantics enabled me to design a comDevious mon web interface for querying and updating the SDC which was performant and acceptable to the users of every region. Another challenge I faced was the design and implementation of the JMS based messaging layer that was used for propagating cache updates from the primary to secondary SDC instances.

My two corporate experiences have taught me numerous invaluable lessons about how software gets developed, deployed and accepted by users in the real world and I have thoroughly enjoyed the challenges of working as a corporate programmer over the last four years. However I believe it is time to turn a new page in my life and chase my dreams of having a positive impact on the lives of others through my work. I believe that a computer science course at UNIVERSITY NAME under the guidance of Professor NAME will equip me with the tools I need to make this dream a reality. I believe that my passion, persevering nature and professional programming experience will help me cope very well with the course work and imbibe me with the skills I seek. I sincerely feel that this association shall be mutually beneficial.