**STATEMENT OF PURPOSE**

**ABHAY SINGH**

**MS: COMPUTER SCIENCE**

While pursuing my undergraduate degree in Electronics and Telecommunications I developed a penchant for subjects like Data Structures, Operating System, Software Computing, and Digital Image Processing. I was able to master technical concepts of programming with Data Structures and Algorithms. Thereafter, I began my career at Capgemini where I have gained considerable exposure to the Software Industry especially in the domain of Manufacturing and Media. I now want to make a substantial contribution to research in the field of Software Engineering and Computer Programming, and in order to acquire an in-depth knowledge of the subject, I have decided to enroll for a Master’s program in Computer Science.

During the first year of under-graduation, I participated in a Robotics event, which provided me with an insight into the manufacturing and handling of a Robot. In my second year, I started working on coding-based Robotics and attended a Workshop MEMS BOT, a Robotics Event at PICT, to understand the basics of Embedded Programming. I undertook a project on Home Security System Using Motion Sensor using C Language for coding. Later that year, I got trained on MATLAB and learned various algorithms which helped me in improving my programming skills further. To enhance my coding skills further, I opted for classroom-based training at IIT-Delhi.

For my final year project, Image Fusion between Panchromatic and Multispectral Image through Principal Component Analysis Transformation, I have calibrated the software modelling and design. The aim of the project was to get an enhanced image for remote sensing by combining features from two different kinds of images from the satellite. This helped me gain knowledge in computer applications such as Image Processing, Voice Processing, & Artificial Intelligence. These activities encompassing various concepts like data structures, algorithms, programming, and software development methodologies have fueled my desire to unravel the mysteries of coding and software. Currently, I am learning Python, a programming language that is vastly used for Machine Learning and Artificial Intelligence in today’s world.

With the aim of acquiring more knowledge in software, I got trained in Java, J2EE, SQL, and after the training, I joined **Capgemini**. I have been working on different projects for our client **Volvo cars** like **ANDON**: Real-Time Manufacturing Support System and INET: Logistics Management System. Here, I have developed Web Applications and Desktop Applications while working on Batch Programming and various Web Technologies. This further helped me to gain invaluable experience in the coding domains of IT, which will be helpful in my future endeavors.

I have been researching on content-based image retrieval, a pivotal aspect of Data Processing in many search-based systems and have published a paper on ‘A Survey on Different CBIR Techniques’ in International Journal of Computer Science and Information Technologies. Having gained ample professional experience and realized the immense opportunities for research in the realm of Computer Science I have resolved to come up with some path-breaking innovations that can change the dynamics of the Computer Industry. I strongly believe that a graduate degree will provide me with the technical knowledge and expertise to realize my goals.

# Hence, I wish to apply for MS in Computer Science program offered by Illinois Institute of Technology especially because of the fascinating array of research work that is encouraged within the hallowed portals of the institute. I am inspired by the research work of Prof. Gady Agam on Software Engineering and would consider it an honor to assist him in his projects. I am certain that at Illinois Institute of Technology I would be able to achieve my full potential. The enriching academic experience at IITC will serve as a beacon in my quest for successfully delivering breakthrough innovations.