**LETTER OF MOTIVATION**

**APPLICANT NAME: VAIBHAVNATH LAKSHMINARASIMHAN**

My life has always been a smooth flowing brook with small dashes here and there. It has certainly reached a critical juncture in my career, when I became inquisitive about Embedded Systems and its applications. The subsequent ignition of passion for the field happened when smartphones and several electronic devices became ubiquitous. This provoked me in taking up Electronics and Instrumentation Engineering as my undergraduate degree.

In 2012, with hard work and perseverance, I secured myself an admission in SRM Easwari Engineering College, Chennai, a reputed institution affiliated to Anna University. For the first two years, I studied fundamentals of electronics and electrical circuits while also gaining some practical knowledge through lab sessions. From 4th semester, I studied various embedded related courses which piqued my interest on embedded systems. Furthermore, I also forayed into embedded programming through microprocessor and microcontroller. Before my final year, I carried out an internship on Embedded Systems at Simple Labs. During my internship, I worked on project *“GSM/ZigBee based Wireless Monitoring System”,* where I programmed using Arduino to monitor the digital single phase meter and notify the owner about the usage of electricity when it exceeds predetermined level.

For my bachelor thesis, I worked on project *“Design and Implementation of Automated Man-hole System”*. Main goal of this project was to prevent manual scavenging and to have an economical and environment-friendly solution. The solution was to have automated movable piston inside the drainage system with a filter to separate out the sediments and prevent any blockages. With the help of automation, the piston pushes the sediments into a portable bin located nearby. To implement the automation, a programming board was designed with PIC microcontroller. The embedded programming for automation was carried out using Visual Basic and program was loaded onto the board using serial bus. I consider this thesis to be a huge accomplishment and was gratified when my thesis work was recognized as excellent during Project Day. As a result, I was awarded Rs.25000 cash prize for the same.

Eventually, I continued my journey into embedded world when I completed online course hosted by department of Electrical Engineering, UT Austin. This course exposed me to fundamental concepts on ARM processors. As part of the course, I carried out a project “*Traffic Signal*” using Finite State Machine method and programmed on ARM Cortex M processor using Kiel uVision application.

Apart from theoretical and practical knowledge on embedded systems I had gained during my bachelors, I intended to improve my programming skills by joining Wipro Limited as a development engineer. I am currently a part of development team in charge of creation of crop insurance website for Agriculture Insurance Company of India. I was trained in various programming languages such as Java, Hibernate and AngularJS, which were used for the development of the website. I am also instigated into Waterfall model, wherein I was able to provide solutions to significant problems faced and suggestions to make the application efficient.

With the knowledge gained from these practical experiences combined with my innate curiosity to learn and explore more, I believe taking up master’s degree in Embedded Systems will be the best choice for me to advance further into the field and guide me along the path of research in future. With Germany being a leader in embedded systems and automation, I feel that the Masters course at your university will provide me an opportunity to learn and work with the cutting-edge research and technology on embedded systems. To facilitate my stay in Germany, I have completed B1 level course German at Goethe Institut, Chennai, India. I believe that my academic, extra-curricular and professional accomplishments along with my strong determination to succeed will allow me to make a mark on embedded field. I look forward to an exciting period of graduate program at your University, which is a vital step in my career.