I am delighted to inform you that I have successfully secured admission in University of British Columbia for Master’s degree in Data Science. My degree program commences in the month of September of the year 2022. I am hereby furnishing this Statement of Purpose which includes all my personal and general i.e. my family details, academic details, work experience, future goals etc. for your discretion. I have also mentioned below the reason for my choice of this particular Program, University and Country. I hope that the information mentioned below provides you all the necessary details to consider my application for approval.

**PERSONAL VITAE**

Throughout my academics I have always been a dedicated and hardworking student, acing examinations as well as extra-curricular. I have always been passionate about learning new things and have always tried to push myself beyond my limits. With constant support and appreciation from my parents, teachers and seniors my self-confidence has grown immensely which has enabled me to follow my dreams and aim for higher goals. Although being academically strong my concentration towards my hobbies, competitive sports and extra-curricular activities have given me the ability to multi-task and maintain a perfect harmony between physical and mental well-being. I have participated in various in-door and out-door sports, cultural events and quiz competitions held by my school and the colleges I have studied in. Swimming, Badminton and Soccer have been some of the sports events I have participated in which have strengthened me physically while Chess, Quiz Competitions, Essay writing competitions, Science Projects and Debate competitions have tested my mental strength. ~~I am also fond of arts and have participated in various cultural events and art events where I got the opportunity to explore and display my artistic talents.~~

~~Reading has been a hobby I have avidly followed right from childhood. Although I have always tried to read more about world leaders, great economies and science I have been a huge fan of fiction, be it George R.R. Martin, Stephen King, William Shakespeare and J.K Rowling, I have read most of their work. I also love travelling and exploring new places, I prefer quiet and calm places where I can get much required peace of mind. Spending quality time with my family whenever possible is also one of my favorite thing to do. We watch movies together, talk about various social and general topics and go on vacations.~~

**FAMILY BACKGROUND AND DETAILS**

Born into a loving family based in Raniganjh, West Bengal, India, my family consists of six members including me. I have been brought up with values like honesty, Respect, Humility, Responsibility and Sincerity which have been my core foundations. I have a very close and deep connection with all my family members but I share a very special bond with my grandparents. My grandfather owns a Jaggery business and the jaggery produced by us is well known for its freshness and quality. My father owns a Jewelry shop and a garment shop in our home town. I have a younger brother who is studying in class 12 and my mother is a home maker. Although my family is very liberal, we have a deep religious background thanks to my grandparents. ~~They have always made sure that we are well connected to our roots and have taught us how important it is to follow your dreams and passions without giving up.~~ ~~Even though I have been given the opportunity to work overseas I have always managed my schedule to share some time with my family.~~ My family have always been supportive of my decisions and have lauded me for my academic achievements. Although I have been away from my family following my career and passion for a past few years I always look forward to coming back to them to share my achievements. Hence after the completion of my program I would like to head back to my home country to establish my career and make up for the lost time I have spent without my family.

**ACADEMIC BACKGROUND**

I completed my Higher Secondary School of Education S.K.S Public School, Raniganj, West Bengal, India in the year 2015 and scored 92%. I scored 95% in chemistry which was a great achievement. I completed my HSC from Central Board of Secondary Education which is an autonomous organization under the Ministry of Education of the Government of India. The syllabus meets International education standards and is recognized by most Universities around the globe. Having a strong fascination towards science and technology I joined Vellore Institute of Technology in Vellore, Tamil Nadu, India in the year 2015 and successfully completed my Bachelor of Technology in Electrical and Electronics Engineering in the year 2019. My CGPA was 9.01 and I also secured 2nd place in Robomaze during the Gravitas 15 fest for the ‘Joystick Control Robot using Arduino’ project, which highlights my strong academic background. I worked hard to learn the subjects that piqued my interest, such as Python programming, C/C++ programming, R programming, Statistics, Calculus and Neural network and Fuzzy control but my thirst for knowledge remained unsatisfied. This led me to enroll in many online courses such as Lean Six Sigma Yellow Belt Benchmark to Design for Six Sigma Black Belt. I also learned about the Design, Measure, Analyze, Improve and Control method for improving the existing performance of firms. Soon after the graduation I was recruited as Six Sigma Facilitator in De-United Food Industries Limited Group, Nigeria. It gave me exposure to implement my theoretical knowledge in practical context. I dived deep into learning data analysis using statistical approach for solving real time problems. Through the process I became adept at MS Excel, Visual Basic and also at data visualization tools such as Power BI and Minitab. I have gained hands on experience in few SAP modules and IoT projects to bring in automation for Industrial Revolution 4.0.

**~~CERTIFICATIONS~~**

* ~~Design for Six Sigma Black Belt,~~ **~~Benchmark Six Sigma~~**  ~~December 2020~~
* ~~Lean Six Sigma Black Belt,~~ **~~Benchmark Six Sigma~~** ~~August 2019~~
* ~~Lean Six Sigma Green Belt,~~ **~~Benchmark Six Sigma~~** ~~June 2019~~
* ~~Lean six sigma Yellow Belt,~~ **~~Benchmark Dix Sigma~~** ~~June 2019~~

**ACADEMIC PROJECTS**

**Design of Home Automation System and Smart Security System using IoT in the year 2019.**

• Devised technology which sends ON command to lamps in case of human detection and operates fan according to the room temperature; the appliances could be controlled by voice commands to aid physically disabled people

• Built a smart security system that notifies if someone broke into the house and contains a fire alert in case of fire accidents.

**Smart Irrigation using IoT in the year 2018.**

• Conceptualized and created an IoT-based automated irrigation mechanism that gives the pumping motor ON and OFF command through the IOT platform based on the soil moisture level.

• Introduced an App to control the sensors via Cloud and receive fire alerts in case of any fire accidents and send ON command to the water pump.

• Installed a PIR sensor in the app that sends the alert signal in case of any animal invasion into the farm and protect the crops.

**Electric Power Load Forecasting using Neural Networks in the year 2017.**

• Used the Levenberg-Marquardt Algorithm to forecast short- and long-term load.

• Compared the system with other algorithms and proved it to be the most reliable as it also accounts for seasonal changes.

**WORK EXPERIENCE**

Soon after my graduation, I began working as a Six Sigma Facilitator with De-United Food Industries Limited Group, Nigeria. My first assignment was in the packaging industry named Insignia Print Technology, where I led improvement projects using the DMAIC method. I worked on projects such as "Reduction of Ink Variance" and "Reduction of Downtime" in the printing machine, which I finished successfully within six months. The project involved setting up the new measurement system for data collection and the use of Minitab software to analyze the data using the Failure Mode and Effect Analysis tool to figure out the root cause for the significant ink variance and the downtime. My efforts resulted in a net savings of $175,000 per year, astounding the head of the business with my analytical skills and statistical approach to solving real-time problems. As a result of my success, I got transferred to Noodle Manufacturing Plant to handle similar projects with same job role. The plant had a major concern about excessive scrap generation, which was reduced by 3% when I worked on it as part of the project, saving $150,000 per year. I used Design of Experiments to regulate proper oil flow in fryer which directly affects the texture and brittleness of the noodle cake.

After successfully completing Six Sigma projects, I was promoted as Head Production Planning and Inventory Control Manager and worked on the project “Automation of In Transit Reports” using Power BI and MS Excel, where I connected a source data spreadsheet to Power BI and represented the data using available visualizations, resulting in efficient tracking and the implementation of FIFO for truck offloading. During this experience, I gained knowledge about Power BI by creating interactive visual dashboards, identifying KPI(s) with clear objectives, learning DAX queries and functions, analyzing the ETL process, and analyzing and presenting data using charts for quick decision-making. I have also gained hands-on experience in a few SAP modules and IoT projects to bring in automation for Industrial Revolution 4.0.

**WHY MASTER OF DATA SCIENCE**

Working with machinery has always sparked my curiosity since I was a child. Seeing a hydroelectric plant close to my home piqued my interest in how the energy of flowing water is converted into electricity and transmitted via electric cables to reach households. This experience resulted in my decision of pursuing engineering as a career. During my Bachelor’s in Electrical and Electronics Engineering studies at Vellore Institute of Technology, I was an active member of the student chapter "International Society of Automation." I had the opportunity to attend a two-day workshop on Machine Learning Applications. It primarily focused on preventing road accidents utilizing ML modules in Python such as Numpy and Pandas. Data science has grabbed my attention since I learned that it encompasses several cutting-edge technology concepts, like AI, machine learning, the internet of things and Data analysis, to name a few. I desire to be a Data Scientist, where I would use data to solve mysteries. So, I got into projects like 'Electric Power Load Forecasting', 'Smart Irrigation using IoT', and 'Design of Home Automation System and Smart Security System using IoT,' where I improved my coding skills in Arduino and Raspberry Pi while also honing my cognitive skills by coming up with new ways to automate things. I also learned about different neural network algorithms and their significance. My interest in the field led me to enroll in many online courses, ranging from Lean Six Sigma Yellow Belt Benchmark to Design for Six Sigma Black Belt. I began my professional career as a Six Sigma Facilitator with DUFIL Group. I worked on several projects using DMAIC and DMADV Six Sigma methods. I used a statistical approach with the help of Minitab software to execute projects on different types of machinery to improve its efficiency and bring $400,000 annual savings. This gave me confidence and curiosity towards exploring the depths of data-driven solutions. The company has offered me the opportunity to gain hands-on experience on a few SAP modules and IoT projects to bring in automation. While automating reports, I became adept at Power BI by creating interactive dashboards, identifying KPI(s), analyzing the ETL process, and presenting data using charts for quick decision-making.

**CAREER GOALS AND FUTURE PROSPECTS**

I intent to begin my career as a data scientist in innovative sectors to obtain a more nuanced grasp of the fastest developing technology, learn to construct sustainable data pipelines, educate myself about machine learning models and receive hands-on experience handling numerous datasets. After completing my program I would like to return to my home country where an ocean of opportunities await professionals backed by international degree and work experience. I would like to start with gaining experience by working with companies like Amazon, Microsoft, Tech Mahindra, IBM, Accenture etc. where I can hone my skills and acquire required knowledge to establish my own startup a few years down the line.

In future, I like to own a Big Data analytics firm, where I will use my acquired leadership and technical skills to solve issues pertaining to environment, health, and sanitation which are the most ignored sector of the decade. I will work hard to build team of experts to help various organization to make data driven business decisions. The society I live in has provided me with far more than I could have imagined. I want to pay them back many times by lowering pollution, reducing traffic accidents, and enhancing health and safety.

With cohort-based Master of Data Science program, my goal is to gain the necessary skillset required to a data expert. I aspire to advance my knowledge in statistics, data structures, data analysis to get better vision of huge datasets. Moreover, I want to have thorough understanding of supervised, unsupervised learning to make predictions about future/unforeseen data and present it using visualization tools for easy understanding. I will try to do my best to come up with innovative project ideas that will aid in my and other students’ progress and I aim to accomplish it within stipulated time. Earning a Master's in Data Science would be a significant step forward in my career.

**WHY THE UNIVERSITY OF BRITISH COLUMBIA**

The University Of British Columbia (UBC) ranks among the top 3 Universities in Canada ~~and is placed on the 35~~~~th~~ ~~spot globally in the best Universities to study in according to The World University Rankings.~~ ~~Established in the year 1908 the University is recognized globally for its contributions in the fields of Science and Technology. UBC is home to TRIUMF, Canada's national laboratory for particle and nuclear physics, which houses the world's largest cyclotron.~~ UBC is home to one of the largest research libraries in Canada~~, the Library system has over 9.9 million volumes among its 21 branches. Eight Nobel laureates, 74 Rhodes scholars, 65 Olympians garnering medals, ten fellows in both American Academy of Arts & Sciences and the Royal Society, and 273 fellows to the Royal Society of Canada have been affiliated with UBC.~~ Three Canadian Prime ministers, including Canada's first Female Prime Minister, Kim Campbell, and current Prime Minister, Justin Trudeau, have been educated at UBC. ~~The University has stringent student acceptance norms and only accepts students with excellent academic records thus creating a great environment for students who are focused on innovation and learning.~~ ~~Speaking of innovations the university is known for its groundbreaking innovations and research with an annual research budget of more than 750 million $ UBC funds more than 8000 projects every year.~~ Students here are guided by highly qualified experts involved in research with universities, corporations, governments, and communities worldwide. In addition, the MDS program concludes with a capstone project that allows students to put their newly learned knowledge into practice. The coursework's subjects, ranging from programming and algorithms to computation and data science workflows, aligns with my wish to explore more about the field. Because the cohort-based Master’s in Data Science program integrates real-world data sets throughout the curriculum, providing the practical, real-world-applicable experience UBC has always been my top choice for the institution I want to pursue my Master’s degree from.

**WHY DO I WANT TO STUDY IN CANADA**

Regarded as one of the best international study destinations Canada is known for its top-level universities, quality of education, highest rated faculty and its education system unlike any other country. ~~The country hosts more than 600000 international students every year which come from 64+ countries around the globe~~. Canada is also known to be the safest country to study in the world because of its international student policies and a diverse culture ~~where majority of the population speak English creating a communication friendly environment for international students~~. The country’s education system is based on integrated learning ~~where students are given an opportunity to work as an intern which is included in most programs offered by universitie~~ allowing students to gain international work experience to boost their career profile. The faculty at every educational institution is selected based on stringent selection norms thus ensuring highest standard of education quality throughout the country. International students who acquire their degree from Canadian universities are sure to be selected for the best professional positions back in their home country ensuring a successful career ahead of them. With all boxes ticked my choice to pursue my education in Canada was an absolute no-brainer, after which I would return to my home country where I want to excel and innovate for the benefit of the world.

**I hereby declare that the information furnished above is true and correct to my best knowledge. I have attached all the documents for the authentication of the same. I assure that I am a Bon-a-fide student who only intends to travel to Canada to pursue my Maters program upon the completion of which I would like to return to India.**

**I would like to thank you for your valued time and patience and I hope that the provided information is sufficient and detailed for the approval of my application. If I am missing any important details or points kindly contact me on my contact information which is provided below.**

**E-mail:**

**Contact Number:**

**Thank you,**

**Yours sincerely,**

**Varshita.**