Statement of Purpose

Coming from a family of people striving for education, I have been consistently exposed to my grandparents' and parents' experiences and achievements. After my intermediate schooling, I was admitted to the prestigious Adani Institute Of Infrastructure Engineering, where I studied various topics like electrical automation, electrical power, electrical services, and energy systems. I chose Electrical Engineering as my undergraduate major as a young adult stepping into the real world. I enrolled in the program because it covered many topics, including creating and testing new electrical systems, focusing on power generation and distribution, and developing cutting-edge technology like self-driving cars and renewable energy systems. My engineering career has progressed smoothly because of my analytical prowess and desire to go down the untrodden path, even though this complex subject calls for a solid grasp of math and physics and the capacity to handle demanding problems.

During my tenure of pursuing my academic progressions and being in a field that practices revolutionary technology, I harnessed my theoretically attained knowledge by equipping myself with some of the most notable projects. My indulgences were initiated as I worked primarily on three research projects during my undergraduate studies. I used MATLAB to construct a customized simulation of a fictitious power system in line with IEEE 5-bus specifications for "Development of Smart Grid using ML techniques." For supervised learning algorithms to identify between different power systems anomalies, such as power swing and line faults, the simulation's objective was to create a time series data set and get an adequate number of clusters using KNN clustering. In "Fault Identification in WECS using Supervised Learning," I designed and examined a unique wind power simulation that resembles the behavior of a freestanding DFIGWECS (Wind Energy Conversion System) with an operational frequency of 60 Hz, and then data was retrieved using Multi-Run. Confusion matrices and graphs were used to compare and analyze the data. The final results were given into the D-Tree, Logistic Regression, SVC, and KNN machine learning algorithms. I examined every technology now available to identify between three-phase faults and power swings in "Data-driven Techniques to Distinguish Between Faults and Power Swings." The review article was published successfully in Nova Science Publishers.

Academically, I upscaled through the odysseys I embarked upon so that the working industry couldn't intimidate the scholar looking to find the soiled grounds of eminence. With such advocacy, I got employed at a reputed in the capacity of a Junior Data Analyst. Currently, I am adorning the hat of an Assistant Manager. Owing to my stellar academic record and ability to grasp concepts to develop unique solutions, I have risen through the ranks. Using Python as the backend language and Power-bi as the front-end service, I have successfully created several complete end-to-end applications that provide detailed information on the entire portfolio. These programs are known as the "Solar Portfolio" and the "Wind Portfolio." I have shown my prowess in data extraction from various sources, including xlsx, pdf, json, websites, and photos, using thorough Python scripts. This data is pre-processed, saved in a SQL database, and updated in multiple Power-Bi Dashboards daily. The performance of solar power plants has also been monitored by me utilizing cutting-edge analytical techniques like SVM, ANN, and LSTM.

Additionally, I have learned a multitude of coding languages, including Python, R, MATLAB-2020a, Octave, JavaScript, HTML, CSS, and SQL, thanks to my enthusiasm for AI. Understanding the principles behind AI and ML has been more straightforward because of my expertise in Web scraping, databases, advanced Microsoft Excel, WordPress, Latex, Bootstrap, supervised and unsupervised learning, deep learning algorithms, and data pre-processing.

If we put some beaming light onto my ebullience for the subject of computer science, I have come to the realization

that it's a popular and exciting subject that emphasizes the core elements of computer programming, networking, and futuristic technology. Coming from a technological background, my resonance has become intertwined with the vertical of computer science. Businesses in almost every sector rely upon technology for business operations, management and communication, recruitment, accounting, marketing and branding, and database management. This creates a demand gap for educated professionals proficient in software development, web design, information technology, networking, and database management. This substantial demand for competent candidates has unlocked newer, high-paying avenues for skilled aspirants with a computer science background.

After spending a tiresome amount of research choosing the right universit for my masters in Computer Science, I have found my interest tenaciously gripped in the esteemed **Southern Methodist University**. The curriculum provided by the institution includes courses like file organization and database management, operating systems and systems software, algorithm engineering, computer architecture and computer science seminars. The academic setup and the well-renowned faculty are what induced me toward your prestigious university. I aspire to learn from them while interacting with top students from around the globe. It also provides a wonderful and unforgettable student experience to learn new things and cultures and make new friends. In totality, it's a golden opportunity for me.

I am confident that the coursework of **MS in Computer Science** will strengthen my academic foundation and act as a gateway to rewarding work and research opportunities in my chosen field. Learning in the seasoned academic milieu and advanced infrastructure at your distinguished institution would greatly maximize my potential.